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ABSTRACT

This journal issue discusses the idea that 1988 was a year in which "green thinking" and environmental matters came to the top of the political and public agenda. At the same time, environmental education received new recognition as a vital dimension of education having relevance to all. In 1989, it seems likely that environmental education will receive further endorsement by its recognition as a key cross-curriculum area by the National Curriculum Council in Great Britain. This publication also provides information on significant trends, initiatives, and the direction of environmental education. Some 30 articles and items cover such areas as: (1) progress during 1988 in England, Wales, and Scotland; (2) research and development initiatives; (3) specific aspects and important case studies; (4) views and reflections on issues; (5) relevant developments in the broad field of education; and (6) a feature looking at three initiatives based on international school links. (CW)

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AREE 1988

Annual Review of Environmental Education

SECOND ISSUE

2

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AREE

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Cover picture: Acid rain monitoring at Epping Forest Conservation Centre. Credit – Liz Wilcott.

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Editorial Policy

AREE's purpose is to monitor and encourage progress in environmental education. In particular, it aims to:

- provide a critical overview of the progress of environmental education in the UK
- report on significant research and initiatives related to environmental education
- report on developments in other areas of education which will affect environmental education

Articles relating directly to practice and methodology will not normally be included in the journal.

Its goals are to:

- assist and encourage all those interested or involved in working in this area by providing a coherent and authoritative review of the year and of trends
- help win increased support and recognition for environmental education amongst decision makers at all levels.

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Contributions and comments

Comments on this issue of AREE, and suggestions of topics or initiatives to be covered in the 1989 issue are welcomed.

Tomorrow's education, today

Is education sufficiently relevant to the needs of the environment?

With the current emphasis on standards and defining content, the message that environmental educators have rightly been trying to put across is primarily educational: environmental education helps the realisation of many educational goals. At the same time, the requirements of the National Curriculum have forced those advocating environmental education to be more critical and clear about objectives, concepts and methodologies, and to express their ideas in a language that fits the current parameters of discussion. Such clarification has helped meet a long time need in environmental education, as well as enabling the lobby to carry more weight in the debate. But have the parameters of discussion drawn up by government excluded an important dimension – that of the importance of education *for* the environment? Perhaps environmental educators should now also assert this environmental half of their case before the chance is forever lost in the final distillation of the National Curriculum.

The Council for Environmental Education was established in the 60s out of concern for the environment. Two decades later, the global and local environment is still showing definite signs of stress and dislocation. As the Brundtland Report underlined, there are increasing indications that we are now experiencing some of tomorrow's environmental problems today (to borrow loosely a current car ad slogan) – and the media, public and politicians are beginning to wake up to this disquieting reality. In March, Prince Charles stated, 'There is a major change in attitude taking place – a growing realisation that we are not separate from nature'. He also referred to environmental trends as providing 'mounting evidence of a gigantic problem that won't go away'.

Yet strangely, mainstream educational debate particularly in the formal sector, seems largely oblivious of this new green awareness. One wonders when those in positions of influence will make sufficient connection between growing environmental concern and the role of education in creating an environmentally literate public. They need not look far to recognise excellent environmental education in existence now – such as is represented in this issue of *AREE*. This work is good both educationally and environmentally. But its scale and incidence is nowhere near commensurate with the needs of tomorrow's environment.

There *are* encouraging signs of change in the educational world, and it may be that environmental education is reaching the brink of some kind of breakthrough. Yet although many teachers seem very aware of its importance, amongst the decision-makers it is still largely seen as being on the periphery. Whilst this is the case, the probability of coherent environmental education for all in the near future seems most unlikely – not least because significant progress will depend on there being adequate enabling structures and real support rather than rhetoric.

With increasing environmental awareness but relatively little environmental understanding in our society, it should be possible to turn a largely receptive climate of public – and perhaps political – opinion into the vastly increased recognition and support that environmental education warrants – and Brundtland suggests is now necessary. There surely has never been a more critical time – educationally or environmentally.

Stephen Sterling
Executive Editor

The Annual Review of Environmental Education is one year old. The first issue of the journal (1987) was very well received in all quarters. The concept of a well-produced journal which would reflect some of the best ideas and practice around, and monitor progress in environmental education has been widely endorsed. We hope this issue will encourage you in your work, and help you promote environmental education in 1989. As before, your comments on *AREE* will be very much welcomed. ■

Looking across the curriculum

Rupert Booth who until July 1988 was HMI with responsibility for environmental education, reflects from an active retirement.

Something educational on the environment for the motoring organisation, an audit of a field centre, setting up two projects, Learning through Landscapes, even visiting some schools – that seems to be what the 'Troisieme Age' is all about to me. At the same time Prime Ministers are talking about the environment, the Green Consumer Guide is becoming a best seller, environmental displays abound and the media and political conferences earnestly strive to make us understand the issues.

Interest in environmental education grows apace perhaps paradoxically as a National Curriculum based on subjects is being developed. This has stimulated discussion on a rationale for what is to be learnt in schools, cunningly avoided in consultation documents. Everyone including the DES – in fairness, very early in the discussions – is suddenly deeply concerned about cross-curriculum aspects, themes and learning. Perhaps the most enlightened are those who talk of the interaction between the host of adjectival educations. But pride of place must go to those who see (as the writer does!) that the major synthesising cross curriculum theme is environmental education perhaps with help from personal and social education and some from design. A number of ideas or models matter.

- Environmental education should incorporate scientific, geographical, historical, technological, sociological, international, economic ways of looking at things.
- Starting points should spread across a spectrum from the small scale, local and personal to the global and world community based.
- The relationship between subjects and the broad concept of environmental education needs definition. Could it be that one of the main reasons for becoming involved in learning the skills, knowledge and attitudes of subjects is to help people to become aware of, understand, show informed concern about and eventually do something about the environment? At the same time as the 'resources' (in terms of what is learnt) are used in environmental learning, so the study of subjects gains more point and is enhanced.
- Evidence from curriculum development, not least in geography and science suggests that approaches should be more active. The model involves observation, listening to students' ideas, testing ideas with the pupils involved in the design of the work, and also synthesis, discussion and communication. The GCSE and the National Curriculum are beginning to demand this. This does not mean abandoning all framework, all well-tried techniques and fieldwork. It means a greater drawing on pupils' ideas during discussion so that what is done is better understood and justified. There are well established techniques which will undoubtedly be used but not without discussion and understanding. The teacher is an essential part of the process who does not know everything but often knows best. He or she will have a major influence on what is done. Generalisations will be made as a result of the work rather than be verified through it.

> The major synthesising cross curriculum theme is environmental education

It is perhaps to stress that the ideas suggested above are not such that the work may go in any haphazard direction. Basic principals must make sure that:

- the techniques used are worthwhile;
- something sound and to a large extent planned is learnt;
- constraints are taken into account.

Briefly in practical terms the above needs to be taken into consideration whilst:

- making sure that the National Curriculum does not muck up good practice in primary education.
- seeking flexible and imaginative ways of environmentally educating across a subject based curriculum.
- ensuring that first hand experience or first class second hand resources continue to be available.

We live in an exciting time in the history of environmental education. ■

Tribute

Rex Beddis – an appreciation

Rex Beddis died on 15 April 1988 at the age of 56. With his death the environmental education movement has lost one of its most ardent champions who combined a wealth of experience with unique vision and creativity.

Graham Hawkins

Adviser for Humanities, Somerset

Rex Beddis was born and grew up in the Forest of Dean and was educated at Monmouth School. From there he went to Lincoln College, Oxford, initially to read physics, but subsequently changed to geography. After training, he taught at Elliott school, Putney, before taking up the post of Head of Geography at Holland Park School, in 1961. From the classroom Rex moved into teacher training in 1965 at Avery Hill College, Eltham, and from there to the co-directorship of the Schools Council Geography for the Young School Leaver Project

(GYSL) in 1970.

GYSL had the highest take-up of all non-Nuffield Schools Council projects and has had a fundamental and lasting impact on geography teaching through its 'environmental' aim of developing an awareness and understanding of people, places and the relationships between them. Rex believed that it was the business of geographical and environmental education to develop in young people a sensitivity to 'place', and to the political and moral dimensions of the issues that shape places.

In 1975, Rex was appointed Senior Adviser for Humanities in Avon. In this post he was responsible for a wide range of environmental education initiatives. These included the Avon Schools Environment Project (1977), the Bath Urban Studies Centre (1977), the Bristol Urban Studies Centre (1977), the Bristol Docks Project (1978), the Avon Schools Built Environment Projects (1980-81), and Schools Grounds Development (1982). A mobile exhibition of his work in and beyond Avon is available from the Bristol Urban Studies Centre for display at schools, teachers' centres and education conferences.

Whilst being responsible as adviser for the traditional humanities subjects, Rex was never constrained by their narrow definitions. His interests ranged widely through art, music and literature, philosophy and science and he brought these interests to bear on one of the most exciting environmental education initiatives in recent years, the cross-curricular, Southern Examining Group's GCSE 'Environment' syllabus. This syllabus, focussed as it is on places and the issues shaping them, represents one of the most complete expressions of Rex's curricular thinking. At a time when the National Curriculum is absorbing so much attention, the 'Environment' syllabus may come to be regarded as an invaluable vehicle for delivering, not only the required cross-curricular themes, but also elements of geography, history, science, technology, English and modern languages. A full description of the syllabus will be found elsewhere in this edition of *AREE*.

As well as conducting his varied career with a brilliance to which few can aspire, Rex was also a prolific author of text books. He produced several series including the three volume *A Sense of Place* (1981-82). In 1985 he published his *New Geography of the British Isles* which gives more

prominence to modern social and environmental issues than other standard texts. A similar examination of issues, but on a global scale, will be evident in a book to be published shortly on the developing world. Rex's increasing concern for the future of the planet and its people is further expressed in *School Links International* (1988), which describes a project linking primary classes in Avon with others throughout the world, and in *Only One Earth* (1988) a pack of videos on environmental issues and supporting teachers' guides published by the World Wide Fund for Nature. Typical of Rex's grasp of the potential of new techniques is the new interactive video on *Volcanoes*, completed shortly before his death.

Rex's work and in particular his international outlook will be remembered through a Travel Bursary to be administered by the World Wide Fund for Nature and open to individuals wishing to travel to develop school links or environmental teaching materials.

Rex Beddis was a man of great intellect and wisdom, dedicated to improving the relevance of the curriculum of all young people. He was also a great friend to many teachers and educationalists, a source of inspiration, warmth and good humour in equal measure. He will be missed by those who knew and worked with him and his influence will be missed by those who never had that privilege. There is a gap in the environmental education world that will never be filled. ■

Reviews of the Year

Review of the Year

How was the environmental education year? Stephen Sterling offers a personal assessment.

The environmental climate – the broader context for environmental education

Since last year, there appears to have been a significant change in the level of discussion of environmental issues.

Stephen Sterling

Executive Editor of AREE and a consultant in environmental education

My comment in this column in the 1987 issue of *AREE* that the Brundtland Report's 'grasp of global realities should ensure that the truth of its diagnoses and prescriptions becomes clearer as time goes by' now seems more than justified. A series of environmental disasters including flooding in the Sudan and Bangladesh, seal deaths and algal blooms in the North Sea, the 'Karin B' episode and general concern about the causes and results of the 'greenhouse effect' have awakened the incipient en-

vironmental consciousness of many.

This shifting of 'green issues' from the periphery of public attention towards the centre received a further, unexpected but effective, push in September when the Prime Minsister herself expressed concern over the greenhouse effect, the ozone layer and acid deposition and added, 'it is possible that with all these enormous changes (population, agricultural, use of fossil fuels) concentrated into such a short period of time, we have unwittingly begun a massive experiment with the system of this planet itself'.

Since that time, the newspapers and broadscasting media, including the 'news' have given very much more coverage to environmental issues than hitherto, and increasingly are making connections between economic, political and ecological issues. It seems the media and politicians are beginning to catch up with public opinion. A Gallup poll commissioned by RSNC in September found that two thirds of those questioned would be willing to pay more for goods and services if it meant a reduction in environmental pollution, while a *Guardian* Marplan poll in October repeated the results. Meantime, the first 'Green Consumer' week was held and the associated book, the *Green Consumer Guide* quickly became a bestseller in the autumn.

One must ask how far this is a temporary enthusiasm or the start of something more profound. The evidence suggests that we are seeing the beginning of a permanent shift in opinion, and if that is the case, it is one that has deep implications for education. Although there are some signs of a new awareness amongst the public, politicians and educationists of the necessary connection between pressing environmental issues and the need for environmental education, this seems still to be at an embryonic level.

International

Environmental education in Europe received perhaps its most important endorsement to date when European Ministers of Education met within the Council of the European Communities in May – yet the outcome of this meeting has received little publicity. The meeting adopted a detailed resolution which agrees 'on the need to take concrete steps for the promotion of environmental education, so that this can be intensified in a comprehensive way throughout the Community'. Whether this agreement will have real effect will be awaited with interest.

The North-West Europe Committeee of IUCN World Conservation Union held its third joint meeting with its East Europe counterpart in July 1988. The meeting was hosted by Norway and participants experienced the Norwegian approach to environmental education – learning through outdoor pursuits.

'Protecting the European Environment' was the theme of an EEC funded conference for young people held in Svendborg, Denmark in November 1988. Britain was represented by a group of 12 young Europeans coordinated by the CEE Youth Unit, who are now planning a follow-up regional conference.

National

In England, Wales and Northern Ireland, discussion of environmental education has been closely associated with the National Curriculum. Since the initial discussion document was produced in 1987, CEE has spent a very busy year working to produce a coordinated response from interested parties. This work is reported elsewhere in *AREE*, but the key feature has been submitting evidence to the Subject Working Groups so that they might adopt the environmental dimension in their work. A main worry remains that even if the Groups that are set up come out in favour of environmental education, many teachers will feel bound to 'teach for assessment' only, whilst there will be little scope or incentive for intersubject coordination within the school curriculum.

CEE also took a leading role in lobbying the House of Lords during the Education Reform Bill. Although an amendment pressing for recognition of environmental education was defeated, the debate was of high quality and gave an unprecedented parliamentary airing to environment and development education concerns.

European Year of the Environment finished in March 1988, and was generally considered successful in its broad educational aims. A total of over 3 500 events and activities were recorded and over two thirds of these were intended to raise environmental awareness. Many environmental educators, particularly at national level, found EYE helped provide a foundation on which they could build more support and recognition of the area. Perhaps as a result of their efforts, government politicians have made more public statements on environmental education than in previous years.

Local Authorities

Each Local Education Authority has been required to produce a statement of 5-16 policy. Without a national survey it is not possible to say whether most will include environmental education, or whether such inclusion will necessarily reflect practice, but there are some positive indications to date. Many minds have of course been focussed on the coming administrative changes and the demands of the National Curriculum. The role of advisers will change, and this is likely to mean less time for supporting environmental education amongst those who have this remit.

At the same time, it is becoming clear that many teachers are lacking training in teaching the environmental/outdoor components of some GCSE courses and of the Science National Curriculum. Ironically, some local authority field centres are under threat due in part to the imminent administrative changes, at the very time that their expertise and facilities seem more necessary than ever.

Evidence suggests that many teachers are well aware of the importance of the area, but are looking for assistance in its implementation.

Whilst the options for environmental education remain unclear in terms of curriculum structures, enthusiasm for the area is clearly growing, judging by the demands for assistance and information from teachers reported by environmental organisations. Evidence suggests that many teachers are well aware of the importance of the area, but are looking for assistance in its implementation.

Organisations

The role of organisations has again been important this year, not least in their vital role in promoting the area in the National Curriculum debate. The need for a coordinated response has ensured a high degree of cooperation among the agencies. The efforts of the environmental education lobby were matched by the development educationists – one example of increasing convergence between the activities and interests of these and other related groups.

A key event has been the termination of the Manpower Services Commission Community Programme (CP). The funding available through this programme was responsible for a great deal of environmental education work which would not otherwise have been done, including support for teachers wishing to get involved in local environmental work. The ending of the Programme represents a major loss of resource particularly at the local level, and one that will hardly be replaced through Employment Training. A number of environmental

education schemes came to an end in September after several years operation with funding from MSC.

The termination of CP hit both ecological and urban studies schemes. It was therefore a further blow to hear of the demise of Streetwork, which originally was the outcome of a bold initiative to set up an independent advisory unit on urban studies. With the closure of Streetwork, the journal BEE – the *Bulletin of Environmental Education* – sadly also comes to an end. Sometimes patchy, sometimes brilliant, this periodical nevertheless has often set the pace, particularly in the early seventies when many teachers were turned on to environmental education through its enthusiasm.

This leaves something of a gap in the overall coherence of urban studies, particularly as Streetwork was responsible for administering the Council for Urban Studies Centres. However, there are moves to establish a new body to revitalise urban studies. Meanwhile, it is good to welcome the rejuvenated Civic Trust Education Group which has relaunched its termly newsletter as *Shaping Place* – marking a change of emphasis from 'heritage' to 'regeneration'. The first issue looks excellent, and as it is sent free to all schools its potential influence is great.

Vigorous work amongst agencies continues, as the Members' Reports supplement in *AREE* testifies. There is much evidence that organisations are tailoring their services to the actual needs of teachers and the GCSE, and it appears that there may be an increasing role for agencies in the provision of INSET as schools become more responsible for their budgets. This funding may represent a real opportunity to build confidence and skills amongst teachers interested to enhance their teaching through an environmental approach.

People

It was with great sadness that we heard of the untimely death in April of Rex Beddis, Senior Adviser for Humanities in Avon. Rex was a leader and a pioneer in environmental education at a local and national level, and his death represents a great loss to the movement.

This year marked the retirement of Rupert Booth. As HMI with responsibility for environmental education, Rupert worked tirelessly 'in' 'about' and 'for' the area, and has undoubtedly made a unique and major contribution over the years.

At the end of the year, John Baines steps down as Director of CEE after ten years. John made a decisive contribution to the advancement of environmental education as a whole, whilst his successor at CEE inherits an organisation fit for much further achievement. Both Rupert and John remain working in the field in freelance capacities.

Conferences

There have been a number of key conferences this year. In particular, 'Education for Global Futures' organised by the Centre or Global Education was a significant gathering of many practitioners from different backgrounds to discuss ways forward in the promotion of education relevant to a world characterised by pressing and interrelated environmental and development issues.

The Environmental Education Advisers Association met in Kent in April to discuss 'Controversial Issues in the Curriculum'. The National Association for Environmental Education's annual conference in Birmingham addressed 'Key issues in Environmental Education' , whilst the Civic Trust Education Group held a one day conference on 'Education and Regeneration' to coincide with a Council of Europe event on town regeneration in Halifax.

CEE broke new ground with a two day conference in Bristol in October which encouraged delegates to challenge their own perceptions of the environment, by experiencing something of the insights of other cultural traditions.

Broadcasting media

Overall, there have been fewer specialist series on environmental themes this year, but coinciding with marked public interest in 'green issues' there has been more general coverage of issues in 'one-off' and news programmes. This may well reach more public but may raise rather than educate on issues. With the deregulation of independent broadcasting imminent, public service broadcasting looks threatened and well-produced environmental programmes and series may become scarcer.

Areas of concern

Some old problems remain. Environmental education still needs more academic input, in terms of working out in detail the implications of progression through the age and ability ranges, and how it can coherently be addressed as a cross-curricular dimension; there is still a need for much better in-service and pre-service training provision – but progress is being made on these fronts. There is now a need to build on the undoubted increasing awareness of the importance of the environment. It is likely that the long awaited HMI 5-16 document on environmental education, originally begun by Rupert Booth, will be published in 1989. If so, it will add impetus to the further growth of this vital area of education. ■

A Scottish perspective

Kate Sankey

Director of the Scottish Environmental Education Council (SEEC)

In Scotland, environmental education should be flourishing. A very promising start was made way back in 1974 with the publication of an HMI report on the subject.[1] It set out the way forward with clarity and vision; its recommendations if implemented would have given the curriculum in Scotland a comprehensive, integrated, participatory and stimulating programme of environmental education. Instead, we have seen piecemeal developments, projects which go part way and statements which seem to be wide open to interpretation.

There are, however, major changes afoot which offer opportunities for environmental education to make a significant input at all levels. The Primary Education Development Project will undoubtedly provide an impetus to teaching in the primary sector through the production of a range of teacher and pupil resources for environmental studies. At secondary level, the production of *Curriculum Design for the Secondary Stages*[2] clearly identifies the place of environmental education in the curriculum. The short description given for the social and environmental studies mode S1 to S4 (secondary years 1-4) is 'Knowledge, understanding and investigation of aspects of the community, society and the environment past and present'. This statement certainly probes the essence of the issue – ranking the understanding of the connections between people, their lifestyles and aspirations firmly with the well-being of the environment and thereby begging questions of responsibility and accountability for the future of planet Earth. The new Standard Grade syllabuses

in Science, Biology, Social and Vocational Skills, Contemporary Social Studies, Geography, Art and Design and Modern Studies all include an environmental element. At Higher grade and beyond however, existing courses pay only limited attention to the process of environmental education. The picture is thus incomplete and fragmentary both in terms of concept and organisation.

Conservation of the natural world, wonder and understanding of the workings of the biosphere, man's relations with the natural resources and his responsibility for the environment locally and globally are all issues which should be built into a continuous and connected strand through the educational process in schools and beyond. Reliance on permeation of the curriculum in certain key subjects is unsatisfactory, thus SEEC in *Curriculum Guidelines for Environmental Education*[3] set out to identify areas of the curriculum where environmental education inserts are required. The guidelines also recommended that each school should have a whole school environmental education policy.

A School Strategy for Environmental Education[4] outlines an interesting team approach at Dyce Academy, Aberdeen, successfully introducing courses specifically in environmental education into the secondary curriculum. The implementation of such a policy should overcome difficulties in co-ordination within the school and between subject areas; if integrated with a Regional or Divisional policy it would further strengthen the environmental education value of studies and projects done in and out of school.

Much of the resources for environmental education on offer is provided by environmental organisations, (public, private or voluntary) and environmental educators within the formal sector; as well as those working close to wildlife, the land, sea or water who can provide those invaluable first hand experiences.

SEEC is committed to facilitating the development of Regional Environmental Education Forums as one effective mechanism for focusing in on the complementary nature of the skills, expertise, experience and sites of an area in order to maximise on the educational benefit. Such a forum will make a major contribution to any Regional or Divisional environmental education policy.

In this way, teachers and lecturers should benefit from better awareness of the available resources as well as an understanding of the best and most appropriate use of sites and visits in the context of a school environmental education programme. Resource providers who are likely to have limited staff time available will be assured of a well-prepared educational visit. The environment has so much to offer education and ultimately education must be for the environment. An ideal to work towards!

The present reality was clearly demonstrated at the 1988 SEEC annual conference 'Theory to Practice'. Four specific areas of the curriculum were examined with examples of environmental education in practice presented by specialist advisors from four education authorities in Scotland; but this was just one side of the conference. The other was represented by some 20 environmental organisations who came loaded with information, resources and facilities for teachers brimful of ideas for school projects, site visits and opportunities for both the formal and the 'hidden' curriculum and eager to contribute. The message which came through loud and clear was the need for teachers to have better access to information and expertise with a particular exphasis on the need for greater opportunities for pre-service and in-service training. Teachers and lecturers must be both competent and confident if they are to be successful in introducing the concepts of environmental education through their teachings. The issues can no longer be dodged. Young people leaving school and college must be well grounded, in order that they can make a positive response to problems of natural resources and their depletion, pollution, population growth, natural and man-made disasters and local, national and international issues, where the continuity of the life-support systems are at stake.

Environmental education must and will be one of the faster developing areas of the curriculum in Scotland for the forseeable future.

1988 will see the completion of year one as the first Director of SEEC. Working with Professor John Smyth our Chairman, together with all committed members, has indeed been an inspiration. I am confident that where there is a will there will always be a way.

References

[1] HMI, *Environmental Education*, SED, 1974.

[2] *Curriculum Design for the Secondary stages*, Curriculum Consultative Committee, 1987.

[3] *Curriculum Guidelines for Environmental Education*, SEEC, 1987.

[4] S Philp et al, 'A School Strategy for Environmental Education', *AREE*, 1987. ■

A Welsh perspective

Dr Alan Young

former Secretary of the Environmental Education Group, Prince of Wales Committee

During the last decade, the Environmental Education Group of the Prince of Wales' Committee has been the main agency concerned with the growth and development of environmental education within the Principality. The Chairman of the Group is Professor Tom Pritchard, (Director for Wales, the Nature Conservancy Council), the new Secretary is Dr Malcolm McElhone, and its members consist of educationalists from schools and colleges and representatives of the statutory agencies and NGO's whose prime concern lies in the management and well-being of the Welsh environment. Apart from being an important and influential forum for the discussion of environmental issues, the Group has also attempted to influence the practice of environmental education in schools by the production of teaching materials (in both English and Welsh) and by numerous school-based projects. This year's project has been concerned with measuring the acidity of rainfall in Wales and monitoring the possible effects of acidity on freshwater habitats.

In Phase I, primary and secondary schools in Wales were encouraged to participate in the WATCH 'Acid Drops' Survey and over 100 monitoring kits were distributed from Gwent College of Higher Education. Phase II, which was sponsored by the Welsh Water Authority (WWA), involved schools in measuring the pH of local rivers, ponds and streams and examining them for 'indicator' organisms. The results from Phase II have yet to be fully analysed, but of the 162 sites examined, 45 had a pH of 6.5 and below and 14 being below pH 6.0. It is hoped

that such information, collected by schools, will be helpful to the WWA and augment their major research programmes on acidification. As one might imagine, however, the main concern of the Group in 1987 was the likely impact of the National Curriculum on the teaching of environmental studies in schools. We were heartened by the publication of *The National Curriculum of Wales* (1987) which stated that the specifications of the National Curriculum were '. . . not in conflict with the ways in which schools commonly organised teaching and learning' (Page 6). Furthermore, the document states that the Secretary of State for Wales would expect the curriculum of schools to respond to the changing economy in Wales, the history and culture of Wales and the need in Wales for a more positive awareness and response to the wider world. The value of adopting a holistic, environmental approach to such matters is obvious. Indeed, topics dealing with these precise issues are often undertaken in primary schools throughout Wales and aspects also appear in the WJEC syllabus for GCSE Environmental Studies.

The cause of environmental education was further enhanced by an HMI conference in mid February 1988 at Llanwrtyd Wells on 'Integrated Studes in the Primary School'. The message from senior HMIs was clear: don't abandon existing good practice.

Thus if a school's curriculum was broad, balanced, differentiated and relevant, and if it was delivered via a series of topics, themes or environmental studies, then the National Curriculum would enhance such an approach by identifying and clarifying '. . . the knowledge, understanding and skills which pupils of different abilities and maturities are expected to have by the end of each key stage' (Education Reform Act 1988). Numerous examples of good practice were illustrated at the Conference, most having a marked environmental flavour. It emerged that most LEAs in Wales were preparing guidelines for schools emphasizing the important role that teachers would play in devising programmes of study.

Currently, the Group is considering its response to the deliberations of the National Curriculum Working Groups, and, specifically the report of the Science Working Group. Personally, I find that much of my earlier optimism has evaporated. As the details of the National Curriculum become more apparent so I become more concerned for the fate of environmental education in primary schools. Three aspects of the Science report are particularly disturbing. Firstly, I consider that the proposals are too ambitious and there is a grave danger that the curriculum has been overloaded with content. Secondly, the holistic approach demanded by most environmental themes is threatened by the early emphasis on the core subjects of Mathematics, Science and English. Thus schools must plan their Science programmes before the working parties on History and Geography have even met. Can we expect schools to re-think their teaching programmes in the core subjects once the details of the other foundation subjects are known? Thirdly, and perhaps most significantly, the profile component 'Science in Action' considers, amongst other things, 'the ways in which scientific knowledge can be related to social, economic and environmental issues . . . ' and 'pupils in the normal course of their work relating their studies to social, economic and environmental issues'.

The most stimulating, high quality work I have seen or been involved in has arisen from primary school children undertaking issue-based learning. One never ceases to be amazed by the maturity and perception which can be displayed by young children and many teachers will be dismayed at the exclusion of this profile component from the primary sector.

I have been fortunate in that during my career I have conducted umberous in-service courses on environmental education in India and Kenya. The primary curriculum in these countries is very content orientated and the methodology commonly displayed is the worst from of didactism. There is a heavy amphasis on testing and evaluation and the advisory (!) service is extensive and punitive. The potential of the teachers and children is enormous, and hardly ever realised. I believe that all these factors are inter-related. Many of the men in India wear flared trousers and in the cyclic pattern of fashion and educational thought are we ahead of them or are they ahead of us? ■

Making progress

The year has been marked by a degree of progress in terms of recognition of environmental education. We present here a selection of statements for interest.

From Hansard, 3 May 1988, on the occasion of a debate in the House of Lords on amendments to include recognition of environmental education, and related areas in the Education Reform Bill.

Lord Hatch

'I do not need to prove to this Chamber the extent of the global dimension of the problems going to be faced with even greater gravity when we are gone . . . our descendants who are now at school have to face a totally different world from that in which we were brought up'.

The Earl of Arran

'We do not want to give emphasis in Clause 1 to any subject, or cross-curricular theme, however timely or important . . . Clause 1 has struck what we believe to be the right balance between the various objectives of the school curriculum.'

Lord Craighton

'We all know that environmental education is today an essential element in the education of young people . . . What encouragement will the Government give to those teachers, anxious and committed to teach environmental studies who at present feel they do not have the remit to do so, and to other teachers who as yet are unaware of the contribution they can and should make?'

Baroness Hooper

'I can assure the Committee that the Government fully recognise the importance of the kinds of topic that have been identified. That is one of reasons why Clause 1 specifically requires the curriculum as a whole to prepare pupils for the opportunities, responsibilities and experiences of adult life . . . We anticipate that one of the first tasks of the National Curriculum Council will be to look at the cross-curricular themes as a whole so that they have proper frameworks for considering the working groups' recommendations.'

From letter to Sir Peter Harrop, 10 March 1988

'I fully recognise the importance of measures which were taken during EYE to put the environmental message across . . . I can assure you that we will ensure coordination between Curriculum Working Groups as they consider their respective subjects. They are being asked to pay special attention to cross-curricular themes and issues which touch upon several different subjects; environmental education

is amongst these . . . No doubt the National Curriculum Council will give early attention to the development of cross-curricular themes when it is established . . . My colleagues and I will seek opportunities to draw attention to support for environmental education during visits to educational institutions'.

Kenneth Baker, Secretary of State for Education

Angela Rumbold, Minister of State for Education, on occasion of WWF computer awards

'One of the main functions of education is to inform pupils about the world around them. An important aspect of this is to give them the means to reach their own well-informed conclusions on environmental issues.'

From reply to the Director of CEE from DES, on behalf of Prime Minister, 1 November.

'You will know that although environmental education is not listed among the foundation subjects for the national curriculum, it is important enough as a cross curricular theme to find a place at some point in the educational experience of most pupils between 5 and 16. Elements of environmental education are likely to feature within the teaching of foundation subjects and can make a unique contribution to understanding in some of them. The Working Groups drawing up programmes of study and attainment targets for the foundation subjects have been asked to pay special attention to cross curricular themes such as environmental education . . . I hope this serves to reassure you that Ministers take environmental education very seriously both as a cross curriculum theme within the national curriculum and as an important subject in its own right.'

From press release from the 1241st meeting of the Council of the European Communities and the Ministers for Education meeting within the Council, 24 May 1988.

The Ministers 'agree on the need to take concrete steps for the promotion of environmental education, so that this can be intensified in a comprehensive way throughout the Community . . . Within the limits of their own specific educational policies and structures, the Member States may make every effort to implement the following measures . . .

- promote the introduction of environmental education in all sectors of education, including vocational training and adult education. It would appear appropriate that current policy on environmental education should be set out in a document and made available to schools and other training institutions . . .
- give consideration to the basic aims of environmental education when drawing up curricula and organising interdisciplinary courses;
- take appropriate measures to develop teachers' knowledge of environmental matters in the context of their initial and in-service training;
- undertake specific action to provide teachers and pupils with appropriate teaching materials.'

The press release goes on to recommend action to be taken at Community level in accordance with the Resolution of the meeting including information exchange, organisation of courses for teachers, exchange schemes and monitoring of the implementation of the Resolution.

See also 'Stop Press' on the last page of 'AREE'. ■

Research and development

Learning to See project

Eileen Adams reports on a project which is investigating the aesthetic and design aspects of environmental education.

'It is the task of the Royal Fine Art Commission to keep government informed on issues relating to public amenity and artistic importance. It is concerned primarily but by no means exclusively with architecture and advises on all matters affecting the visual environment.' The Commission has recently set up the Royal Fine Art Commission 'Art and Architecture Education Trust' to promote environmental education and increase a general understanding of art and architecture. One of the first initiatives has been to initiate a research project *Learning to See* to investigate work in general education which relates to the aesthetic and design aspects of environmental study.

Eileen Adams

Research Director, Learning to See project

This will report on work in schools based on environmental experience which develops:

- aesthetic and design awareness;
- a feeling response to place;
- discriminatory and critical skills (developing capacities for judgement);
- design ability (concerned with shaping the environment and dealing with change).

The study seeks to identify courses in teacher training and architectural education which relate to this area of study in school and will focus on the work of outside agencies that have helped to promote it, such as the RIBA, RTPI, urban studies centres, architecture workshops, artists in schools and community arts groups.

The Learning to See report will be presented to the Royal Fine Art Commission in April 1989 and will include recommendations on the role of the Art and Architecture Education Trust and its involvement in environmental education. Eileen Adams is responsible for the research programme. She has been helped to formulate this with the help of a Steering Group of representatives from a number of national agencies concerned with environment and education. Many colleagues in the art, design and environmental education fields have already contributed to the research material and a picture is emerging of a complex field of operation, involving a variety of agencies – not always working together – to extend young people's experience of the environment and deepen their understanding of it.

The current emphasis in the research is to document case studies of work in schools. The

hope is to find examples of work of pupils from five to eighteen years old which covers the full range of studies. From the material collected so far, it is evident that pupils in infant schools as well as sixth forms can engage in a wide spectrum of Learning to See studies. The need is to tease out the content and methods of learning and teaching that are appropriate for particular age groups. But it is not easy to locate the evidence – teachers and pupils are often so busy doing the work that there is no time or opportunity created to document it. Sometimes a few drawings, photographs or maps are all that remains, but so often all trace of the learning and teaching processes is lost.

This must be an important consideration for all those involved in environmental education – how might we reflect on our practice to determine the best ways of promoting learning in a complex and dynamic area concerning people's perceptions of the man-made environment? The need is to understand learning processes and how to initiate, promote, support and direct learning, how to teach pupils how to learn. Learning to See is much more than developing observation skills. It is about understanding, thinking, discriminating, valuing and taking action. It is about being curious, concerned and caring. It is about being motivated to want to do something to improve environmental quality. It is a fascinating area of study.

The research project started in April 1988 and will end in April 1989. Although the report is being prepared for the Royal Art Commission, it will be made available to the appropriate working parties for the National Curriculum and it is possible that an abbreviated version will be generally available later on.

An information leaflet about the project is available from Eileen Adams, 75, Gaskarth Road, London SW12 9NN. ■

Planning and implementing environmental education curriculum initiatives in primary and secondary schools in England and Wales

What factors assist or inhibit environmental work in the secondary school? Mike Parry summarises the findings of a research project that he carried out in 1986-87.

Mike Parry

Department Head, Newland School, Kingston upon Hull

The National Association for Environmental Education's (NAEE)*Statement of Aims* had been revised in 1982 but it was felt by the NAEE Executive that as a result of changes and advances in both education and the environmental movement a further revision was necessary. It was also considered important to investigate the circumstances which influence schools in their involvement in environmental work and the factors influencing the management of environmental curriculum innovation, planning and implementation. The research was jointly organised by the NAEE and the Department of Science Education at the University of Warwick and carried out by myself as a School Teacher Fellowship. At the time, I was co-ordinator for Environmental Education across the Curriculum, Valley Park School, Wolverhampton. As a result of the research it has been possible to draw conclusions which will assist schools in the implementation of environmental education.

Thirty-nine schools which were actively involved in some environmental work were visited, the concept of such work being defined very broadly. Schools were thus able to make a response relative to their particular situation. In each school, a structured discussion was held with some of the staff. The discussions focused on the stimulation for and management of environmental curriculum innovation, forces acting for and against environmental work in the school and the aims and type of environmental work. The findings of the study are discussed below.

Circumstances which interest schools in environmental work

The stimulus for involvement in environmental work comes from personal, societal and educational factors, but such work is interpreted widely and there are varying levels of commitment. Those working within the education system are realists and are aware of their own personal and professional situations. In schools, as in society as a whole, awareness and concern for environmental issues is growing and is leading to action, but there is still much suspicion and misunderstanding.

The study shows the significance of school personnel in the stimulus of curriculum reform in environmental education. The majority of headteachers saw themselves as the main influence for change and had particular educational and environmental philosophies. Some teachers saw themselves as pioneers in environmental education, but sometimes felt isolated from their colleagues. These teachers were aware of the curricular implications of their work in terms of social and political influences, and recognised that they were at times asking pupils to investigate established life-styles and philosophies and consider alternatives.

Institutional change was recognised as a stimulus for curriculum change. Teachers were willing to react positively to an opportunity for curriculum evaluation and reform, especially in terms of subject integration and the provision of concrete learning experiences. Many schools wanted to give their pupils pleasurable learning experiences in the environment, and this theme can be traced in the aims of several teachers.

The influence of the 'Romantic' tradition on environmental education was very evident. Teachers were reacting not so much to established educational philosophies and recognised environmental challenges and problems, but to the perceived alienation of man and nature. Some teachers saw nature study and some form of 'earth education' as part of the liberal education which is important for all children. There was an expressed desire to recreate the old and explore connections with our agricultural roots.

Persons external to the school were seen as less influential than school staff in the stimulus

for environmental work. Those who did have some significant impact were easily able to form personal relationships with colleagues. They also had the ability to demonstrate the advantages of curriculum reform in favour of environmental education.

Training

Responses to questions concerning the environmental element in the training of eachers involved in promoting environmental work ranged from the idea that all teachers are trained in this work, because all subjects contribute to environmental understanding, to a negative reply for all teachers in the school. This mirrors the confusion and varying interpretation of the philosophy and methodology of environmental education. Conditions and resources, both human and material, are needed to help teachers appreciate and absorb those parts of philosophies and methodologies which they perceive as most unfamiliar. Teachers can be shown how a practical activity is related to a philosophy, and how a sympathetic review of environmental philosophies can help schools to produce more unified and coherent environmental provision.

Forces acting for and against the planning and implementation of environmental work

School based curriculum development has been the focus for most innovation in environmental education even though the stimulus for innovation may have been external to the school. If curriculum development is to proceed there is a need for considerable change in teacher behaviour, and there is a need for professional development. High personal costs are involved in innovation and it is difficult to evaluate possible future developments. The reluctance of some teachers to be involved in curriculum innovation must be considered in terms of the

If curriculum development is to proceed there is a need for considerable change in teacher behaviour, and there is a need for professional development.

concept of socially organised knowledge. Most teachers have a perception of knowledge which is worthwhile and high status and this is seen as valid 'school knowledge'. Those trying to reform a curriculum need to work from existing strengths and good practice and involve all colleagues in the planning process.

Those proposing a holistic approach to environmental education are concerned with both scientific understanding and human responses. There is need to appreciate the moral dimension of our decisions and recognise that we are capable of changing attitudes and behaviour in response to circumstances. Many schools which saw the environmental approach as a curricular strength recognised and capitalised on such cross-curriculum aspects. Scientific investigations, creative work, and understanding of and involvement in decision-making processes were seen as a unitary whole.

Environmental organisations which may be seen as 'political' have an impact on schools but teachers in this study did not identify them as having any influence on planning and implementing the curriculum. Schools made practical use of the resources of many organisations to support curriculum developments. However, apart from the use of some guideline documents, there seemed to be little influence on the philosophy and planning of environmental education which stemmed from environmental groups.

Some schools in the study felt that the use of LEA advisers and advisory teachers staff in planning and implementing parts of an environmental education programme gave credibility to the development and raised the status of environmental work in the eyes of the teachers. Those in schools who wish to promote environmental education must be aware, however, of the dangers of using officers who do not have an understanding of the environmental work which the school is considering, or an incomplete and unsympathetic knowledge of the school situation and the teachers' perceptions.

Managing environmental curriculum innovation

Radical or moderate reforms may be desired but they can only be instituted by the eachers in the classrooms. Innovation needs to start with a recognition of the school's structures and personnel and their state of development and attitudes. Many schools seem to work in isolation from the wider context of environmental groups. Greater co-operation and understanding between all concerned with developing environmental education is part of the management process required in schools and local authorities.

Philosophies and ideological stances can be explored in terms of both education and environmental awareness, but if we are to tread more lightly upon the Earth these must be translated into school practice.

The NAEE's Occasional Paper number 11 contains the full findings and recommendations of this research project and is available price £3.00 inc p&p. In addition, a shorter 'popular' version for more general use is in preparation. Contact NAEE, West Midlands College of Higher Education, Gorway, Walsall, WS1 3BD. ■

INSET and environmental education

Chris Gayford explains the background to a new project designed to introduce environmental education through the development of INSET materials.

Chris Gayford
Project Coordinator

In July 1988 the Central Electricity Generating Board began funding a project through the CEE to develop in-service training for teachers in environmental education. The project, which will last for two years, is a timely initiative which can be related to developments in the new local authority grant system for INSET (GRIST) set up by the DES, the GCSE examinations, TVEI and the National Curriculum. Important features of the project are that it will address issues concerned with progression in education from 5-16 years, the concept of environmental education as a cross-curricular theme (rather than as a separate subject), and aspects of management and staff development as well as teaching approachs.

The primary purpose of the project is to produce materials for INSET which will concen-

trate on experiential learning. The materials will lend themselves to use by groups of teachers within schools from different disciplines, allowing them to explore interdisciplinary approaches. The proposed format is that there will be an introductory module where emphasis will be on raising the awareness of teachers to the need for and scope of environmental education and its implications as a cross-curricular theme. In addition, a further two modules are planned; one which relates to science and the other to English. These two have been selected to coincide with core curriculum areas in the National Curriculum.

The materials produced will reflect current methodologies using interactive and discussion-based approaches with elements of problem-solving, cooperative learning and decision making, and importantly, some exemplar materials will be included. Active strategies will be used which elicit the ideas of those who are receiving the training and encourage them to come to their own understanding of the importance of environmental education. The intention, therefore is not to tell teachers what they should be doing.

Since environmental education is not usually considered to be a subject on the timetable, and therefore does not have a time allocation, the project will help to show teachers of separate subject areas how they can achieve their educational objectives using an environmental approach. Also the whole matter of proper progression through from 5-16 years is a significant theme of the work.

The materials will be developed, trialled and evaluated in conjunction with several LEAs. Sheffield, Hertfordshire and Berkshire have already agreed to cooperate and others will be invited to join. Work will be coordinated through a central team of the CEE in Reading and already work is well under way with the introductory module. It is expected that the first full trial material will be ready by the end of 1988. Each module is likely to consist of a variety of suggestions and resources for running a three-hour INSET workshop, providing considerable flexibility and choice in the activities undertaken. This is an exciting project and one which could have a considerable impact on environmental education in schools.

Interested readers may obtain more information from Chris Gayford at CEE. ■

Teacher education and the global environment

What does the global environment demand of teacher education? Roy Williams explains the thinking behind a new programme.

Roy Williams

Research Fellow, University of Sussex

'Few countries, if any, adequately prepare teachers to effectively achieve the goals of environmental education in their classrooms'.[1]

The growth of international concern about environmental issues has been described as 'a major social phenomenon of the 1960s and the 70s'[2]. Alongside this growth of concern, there have developed a number of perspectives on the nature of the environmental debate. Some of these have their origins in the concepts, and views offered by the natural sciences. Others emanate from the social sciences and the arts and pose the question: can global environmental issues and problems be adequately understood with out reference to the social, economic, political and cultural dimensions which frame them?

The scale of the debate was also extended during this period – from local to global –and the requirement to view the world as a set of systems in interaction is now a governing condition of any approach to environmental education; or should be! This means that to be effective in this area of the curriculum, the education process has to connect with environment and development issues and become 'a critical element in the all out attack on the world's environmental crisis'.[3]

After Stockholm came the International Environmental Education Workshop held at Belgrade in 1975 which produced the Belgrade Charter – A Global Framework for Environmental Education. The Charter speaks of the need for a new concept of development – one which takes into account the satisfaction of the needs and wants of every citizen of the earth, of the pluralism of societies and of the balance and harmony between humanity and the environment, and calls for the eradication of the basic causes of hunger, poverty, illiteracy, pollution, exploitation and domination that presently exist in the world. To accompany this new concept of development, there needs to be a new global ethic which espouses attitudes and behaviours for individuals and societies that are consonant with humanity's place within the biosphere and which recognises and sensitively responds to the complex and changing relationships between people and their environments.

Environmental education must construct a pedagogy that is relevant to the nature and demands of the new concept of development and its accompanying global ethic.

Stockholm, Belgrade, Tbilisi, and more recently the Brundtland Report, have attempted to give a high profile to the importance of environmental education and to mark out its area of concern and operation. In addition, they measured the scope of the challenge to educators by providing a global perspective and consolidating environmental issues with economic growth and development, political and social behaviour, ideologies and ethics. Thus the domain for investigation and analysis was enlarged both physically and intellectually. Environmental education, if it is to effectively respond to this challenge must renew its philosophy, revitalise its processes of understanding and construct a pedagogy that is relevant to the nature and demands of the new concept of development and its accompanying global ethic.

In 1985, the Worldwide Fund for Nature (WWF) UK decided to support a project that set out to explore and examine the nature of the provision within teacher education for addressing major global environmental concerns. The project comprised two stages involving:

- a comparative examination of a selected number of educational systems as a means to identify the scope and sequence of the knowledge being

taught and the methods advocated, appropriate to such knowledge;

- the development of a curriculum programme for inclusion within teacher education courses which would serve as a basis for the 'generalist' teacher wanting to address global environmental issues in their classroom teaching.

The report on the first stage of the project was produced for WWF in December 1986 and served as a working agenda, or blueprint, for the design and development of the curriculum programme.

Research findings

From the research conducted during stage 1 of the project, there emerged several important concerns which had a significant bearing upon the design process of stage 2. In summary, these were:

- the failure, with few exceptions, of teacher education to adequately introduce students to the major ecological and development problems that have increasingly beset the world, especially in recent decades, to the point of crisis. This failure should be judged against the background of increasing public awareness of global concerns induced by the much higher level of visibility that these concerns have been given in the media and in the serious literature of scientific journals, commission reports and findings, and concerned writers.

- the relegation of environmental education to the periphery of the curriculum or to a subcontracted element within another discipline or subject area. This has led to an imbalance in approach by providing an isolated interpretive framework for investigation and analysis of issues and isolated problems. Further, it has reduced the scope of the substance and the methodology of the area of study by eschewing interdisciplinarity in approach and synopsis in the evaluation of content.

- the fragmentation of meaning as a way of achieving curriculum legitimation. The controversial nature of environmental education has led to the acceptance of a selective curriculum in regard to the nature of the knowledge taught and the methods advocated. Linkages with other controversial areas of study, where matters of conflict and dispute (political, economic, ideological, cultural) have to be considered, are generally discouraged. The espousal and advocacy of a holistic, critical education approach to teaching about environment and development within the school curriculum has in itself become a controversial, political issue. The consequence of this has been to play it safe – environmental studies and environmental sciences being the acceptable substitutes – or alternatively, bury the problems within legitimate subjects.

'One Earth – Many Worlds'

The global environment as product of systems in interaction and under threat of massive and perhaps irrecoverable destruction is a complex and difficult area of study for inclusion in the everyday, formal processes of education. The outcome of this project is an attempt to provide the general teacher with the means to introduce, with confidence, the global environmental predicament into the classroom. To be published as a modular programme, under the title *One Earth – Many Worlds*, it will offer to students in training two interrelated frameworks for adoption within their courses; a framework of knowledge and a framework of methods.

These frameworks are subject to a procedure of critical thinking and practical assessment into which the students are inducted through a series of workshops and continuous practical assessment over a designated period of their course. The student is encouraged to function as a decision-taker, not only in respect of determining the nature and substance of the knowledge to be imparted and the methodology to be employed, but also in monitoring and evaluating his or her own process of decision taking in the implementation of the programme in the teaching situation.

The location of the programme is of particular importance to its objectives. If it is to offer some means by which the principles and concepts of environmental education should be realised in practice, then the programme must be placed within the 'professional' studies area of teacher education. Environmental education is not a subject; still less is it an 'across the curriculum' approach; and even less is it a sub-contracted component of another discipline, or cluster of subjects. It is what it declares itself to be – an education – a process of learning and teaching through which knowledge, skills and values are imparted, leading, hopefully, to the betterment of the individual and the society in terms of understanding and behaviour for the achievement of the common good of all.

One Earth – Many Worlds is, and likely to remain, an experiment, a programme of education to be tested against experience. For the student it offers a foundation of limited understandings and interpretations upon which to build and a methodology to be evaluated. It is not a definitive curriculum for environmental education. The premise upon which it has been devised is that of an hypothesis to be challenged and to be changed or discarded if it fails to meet the demands of that challenge.

The crucial role of teacher education

Over recent years, WWF UK has initiated and supported a number of innovative and challenging curriculum projects in the field of environmental education. It has attempted to extend both the concept and practice of this area by encouraging new thinking to take place and allowing new ideas to be tested. The direction of its thinking over this period has inevitably led to a consideration of the roles and function of teacher education in promoting and disseminating these ideas. *One Earth – Many Worlds* is an acknowledgement of the crucial importance of teacher education in the strategic development of environmental education if it is to fulfil the hopes, aspirations and urgent demands of people, institutions and organisations for a safe and habitable planet.

References

[1] 'The Tbilisi Declaration', *Connect*, vol 2, January, 1978.

[2] F Sandbach, *Environment, Ideology and Policy*, Blackwell, 1980.

[3] Recommendation 96 of the Stockholm Conference on the Human Environment, 1972. ■

A window on the world? – independent broadcasting and environmental education

David Browne traces important changes in environmental broadcasting in recent years and raises a question about its future.

David Browne

Educational Broadcasting Officer (Development), IBA

Television and radio are unquestionably a major source of information, entertainment and education for most people in Britain, and continue to be the subject of controversy and debate. 'Window on the World' or 'Idiot's lantern'? It all depends on your point of view, what you listen to or watch and whether you do so regularly. But TV and radio in Britain take their public service responsibilities seriously, and part of that service is to provide a varied mix of programmes and cater for a range of audience interests and needs. For television, the world in which we live is a natural and obvious subject and has had a place in the schedules since the earliest broadcasts. In May 1957 for example, ITV transmitted the first regular television service to schools in Britain – heralded as a 'window on learning' and featuring on its first day a talk by HRH Prince Philip on his Commonwealth Tour. From the beginning of ITV adult education programmes in 1962, 'our world' was also a part of the TV curriculum.

From natural history to social action

Natural history programmes, some aimed at children, others for adults, have long been popular with viewers and the tradition continues today. In June 1988, the IBA conducted a survey into viewers opinions on new developments in broadcasting, and asked what viewers would like to see more of on their screens in the future. Out of 29 categories of programming, 'nature and wildlife' programmes came second, topped only by recently-released feature films. Central TV's series *Nature Watch* and Anglia TV's *Survival* regularly have audiences of over 7 million. Children's programmes often feature animals, and 'furry friend' stories regularly crop up on news bulletins.

Culture and societies different from our own have also long held a fascination for broadcasters, and there is a tradition of intrepid camera crews venturing into unfamiliar, and sometimes hostile environments. Until relatively recently, broadcasters could perhaps stand accused of treating their subjects in a patronising and sometimes degrading way – emphasising exotic cultural traits, or the consequences of ritual and taboo. However the growing awareness brought by development education about other cultures and traditions have perhaps contributed to a more 'mature' approach amongst broadcasters to their subject. Certainly Granada TV's outstanding series *Disappearing World* and a documentary series shown recently on Channel Four *Baka, People of the Rain Forest* give testament to this.

But the greatest impact on the relationship between broadcasting and the environment has been brought about by changes in the structure of independent broadcasting itself. ITV is a federal system whereby fifteen contractors hold a franchise (awarded by the IBA) to serve their region with local programmes as well as those that are networked. Since the early 1980's there has been a requirement for each ITV company to transmit a proportion of local education and 'social action' programmes (or LESA, for short) every week. These can include single documentaries, educational series, 'social action' programmes or spots in the local news magazine programme, and community service announcements. These provide, and have yielded, excellent opportunities for covering environmental issues and allowing local groups to make their voice heard on TV. Independent local radio stations too, often cover 'environmental' stories. In the TSW transmission area (Devon and Cornwall) a *WaterWatch* campaign involved over 400 schools in testing the quality of local rivers and streams. In the Yorkshire TV area an *Operation Eyesore* campaign activated hundreds of viewers into submitting projects, and many were featured on YTV's subsequent *You and Eye* programmes. Central's local documentary series Eco covers a spectrum of environmental issues in its region; London Weekend Television's *Action* spots, an association with the London Wildlife Trust, ('the other LWT') have encouraged Londoners' to spot and log sightings of tawny owls, badgers and other urban dwellers. Such examples testify to the strength and vigour (and ingenuity!) of ITV's regional programmes, and of programme-makers desire to collaborate with agencies/groups in their region.

In November 1982, Channel Four (a wholly-owned subsidiary of the IBA) began broadcasting with a special remit from Parliament to be innovatory and cater for interests and minorities not fully served by the other TV channels. Environmental programmes featured from the Channel's first year, culminating in major 'seasons' of programmes – *Worldwise* – in 1985/6. The 1985 season spanned some five months and comprised over 70 programmes. Channel Four continues its commitment to this programme area, and future programmes include major series on the Mediterranean Sea, on geomorphology, and a fascinating documentary on the effects of Chernobyl on hill farmers in Cumbria – *The Hills Are Alive*.

During the 1980's the growth of 'social action' broadcasting, and of Channel Four's unique contribution, were in tandem with a growing concern that the viewers education didn't end when an 'educational' TV programme was over. Broadcasters had a duty to 'support' these programmes in a number of ways; by publications, telephone advice/referral, workshops, conferences, discussion groups. Further, they should find ways of publicising programme information in advance, so that individuals and groups could make more effective use of what was planned for transmission.[1]

Thus environmental, and many other programmes generally have associated booklets, information packs etc enabling viewers to follow-up an interest or concern that the programme may have sparked. During *Worldwise* (whose maxim was 'think global, act local') viewers were directed to environmental groups in their area, and this service continues via contact address lists printed in supporting publications. Channel Four has produced well over 300 such publications to date – requested by over 420 000 viewers during 1988! Viewing groups have also been formed, under the auspices of the International Broadcasting Trust and in projects in partnership with the National Federation of Womens' Institutes, to watch and discuss environment programmes.

Working with agencies

Broadcasters, as part of their 'public service', have developed off-screen activities and initiatives. A prime example is Central Television's formation of a Television Trust for the Environment in 1984, bringing together programme-makers and environment and development groups throughout the world to make and distribute programmes about environmental concerns. The first fruit of the Trust's collaboration was the film *Seeds of Despair*, which brought back to Britain the first tragic pictures of the 1984 Ethiopian famine and became the starting point for the UK's massive famine relief effort which culminated in Live Aid.

The impetus from EYE and a rising 'green' consciousness in Britain and Europe helped consolidate a broadcasting trend that had already begun – a shift away from 'furry friend' programmes to those concerned with environment and conservation issues.

During European Year of the Environment (EYE) in 1987, Central TV played host to ECOVISION – the European Environmental Film Festival, and between them ITV and Channel Four broadcast over 30 TV series on environmental issues. The impetus from EYE and a rising 'green' consciousness in Britain and Europe helped consolidate a broadcasting trend that had already begun – a shift away from 'furry friend' programmes to those concerned with environment and conservation issues. EYE also boosted collaboration between broadcasting and environmental agencies. CEE established a 'media' forum' (compromising representatives from both the IBA and BBC) which established a number of regional one-day workshops in the UK and four lively 'evening debates' at the London Ecology Centre. The workshops and debates gave an opportunity to explore and discuss ways of working together, of access to the media by local groups, how TV treats 'hot' environmental issues, and how these issues are developed and treated in TV soap operas. Both sides, we hope, learnt from the lively and frank discussions.[2]

Also during 1987, a major TV series *Battle for the Planet*, made by the International Broadcasting Trust (IBT), was shown on Channel Four. The programmes themselves (shown later in a number of countries in both north and south hemispheres), newspapers, books and teaching materials were used as a form for debate on the causes and cures of environmental destruction and the factors which make for present world-wide hunger and poverty. Responses received by IBT from viewers were collated and forwarded to the World Commission on Environment and Development, whose leader Mrs Gro Harlem Bruntland brought the attention of the UN General Assembly to the project and its conclusion. To quote IBT's Deputy Director 'Television is at last becoming more than a 'window on the world'; we are beginning to understand its capacity to bring about change'.

An uncertain future

Thus, in 1988, there is still a place for the natural history programmes that appeal to adults and children alike, but they are part of a spectrum of output (local and networked) which convey a much broader interpretation of the natural and built environment, and encourage active rather than passive viewing. But 'public service' can only survive in a climate which allows it, and indeed encourages it, to flourish. Broadcasting, as we have traditionally known it, is about to undergo massive changes – starting in November 1988 with the publication of a Government White Paper on the future of the industry. New channels, terrestrial and extra-terrestrial, and a free market economy in place of the regulated system we have at present, have radical implications for what appears on our TV screens and through our radio receivers. All the above examples of programmes and projects saw the light of day because of obligations upon the independent TV channels, and encouragement and support by the IBA, to provide a public service alongside commercial imperatives. If such regulation goes, and a broad spread of programmes becomes narrower – led by audience ratings and the profit motive, then the exciting, the innovative and the challenging will almost inevitably go. Perhaps we will need to call on our environmental colleagues to help defend and preserve what has been acheived, lest the curtains be drawn on a window which should enlighten, challenge and delight.

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[2] IBA Quarterly *Airwaves*, Summer 1987. 'Holding the Mirror up to Nature' from IBA Information Office, address above.

For further information contact David Browne, Educational Broadcasting Officer (Development), IBA Education Department, 70 Brompton Road, London SW3 1EY. Tel: 01 584 7011 Ext: 346. ■

The Hills Are Alive
A Border TV film crew document life for Cumbrian farmers after Chernobyl

Taking it to the streets – CEE's Youth Training Project

How does one persuade disadvantaged young people to become interested and concerned about environmental issues? Phil Smiglarski describes the approach taken by the CEE Youth Training Project.

Phil Smiglarski

Youth Officer, Department of Recreation and Community Services, Birmingham City Council

For some years, CEE felt there was scope and a need to introduce the issue of the environment into the youth service. As a result a project, funded by the DES, Countryside Commission and Nature Conservancy Council for three years was set up in Birmingham (an inner city area with inner city problems) and Staffordshire (a rural area with rural problems). Terri Dixon started her work in Staffordshire in May 1987 whilst Jill Edbrooke started in Birmingham in September 1987. When discussions about the project first took place it was felt important for the project to get involved with young people in youth clubs who were not being reached through schools. This meant that the workers appointed by the project would need to be able to relate to these young people and be prepared to get involved with them.

It was felt important that the workers should demonstrate good practice rather than produce more material that would be sent to the youth club alongside all the other printed leaflets and letters that get posted through the youth club letter box. It was also felt important not to tell youth workers what they should be doing, (there are plenty of people to tell them that) but through working through them show how environmental issues could be raised with young people.

The workers appointed were only too aware that they were not going to achieve their goals by going into the youth club and showing slides or giving out leaflets. The young people who go to a youth club do not want to be told what to do. They have gone to have a good time, and to do what they want and they are certainly not going back to school. The skill that is required is one of not just telling young people about the environment but also of getting them involved in the issue, whilst also enabling the young people to do what they want to do and allowing them the control over their own lives which is supposed to be one of the goals of the youth service. The project workers had to be able to make contact with groups or young people playing table tennis, or listening to music, or talking and having fun with each other. There was no captive audience to talk to.

If the workers were going to be successful, they needed to build up a friendship with the young people to begin with, and then raise environmental issues which were relevant to them. This meant that the workers had to start where the young people 'were at'. There is very little point in trying to create awareness of important environmental problems that affect the world when around you there is litter, badly maintained housing, and graffiti on the walls. How many of these young people who live in poor environments will be able to consider issues such as the deterioration of the ozone layer or the pollution of the sea?

Getting the right approach

At the project in Birmingham, the youth worker got to know part of a group of young people who are believed to be responsible for some of the graffiti on a housing estate, and she was faced with the problem of how to raise environmental issues with them. Should she take the approach of telling them that they are spoiling the environment and risk being grouped with others such as the police? If she did this, she might also lose any friendship that she had built up. Should she refuse to let them into the youth club and lose the very contact that she had struggled to make? How could she encourage these young people to be concerned about their environment?

This dilemma led to a project in which the youth workers let the young people paint a mural in the youth club. This not only gave the young people a chance to change the environment of the club but also gave them a sense that the club belonged to them: they were able to put their mark on it and as a result feel some ownership. After starting where the young people were (in the youth club) the workers could then look to the immediate environment outside. This led to the young people doing several pieces on the outer wall of the community hall which had graffiti on it. Such engagement in changing their own environment I believe, gives a good starting point from which to encourage young people to think seriously about other environmental issues.

This example is also a lesson to other youth workers of a positive way of using the environment to increase the level of participation by young people. The youth club environment is very important to young people. How relaxing or welcoming or exciting it feels, how male dominated, or unwelcoming to black young people is reflected in the environment.

All too often it is decorated by adults, its colour scheme is chosen by adults, its furniture layout and fittings and even such things as the coffee bar and the posters on the notice board are decided and organised by adults. Sometimes even the music will be chosen by the adults. Surely young people themselves know better than adults what they find welcoming? Issues in the youth club are often reflected in the outside world. Housing estates are often designed by 'professional workers' for the people who then have to live in them. Young people and adults often feel a real sense of powerlessness over their own lives.

Participation

This project has clearly identified for the youth service the issue of the environment as being relevant to that of participation – and this is about enabling people to have power over their own lives. Most people need to be able to feel involved in their environment in order to care for it, which means participating.

These projects have given the workers an opportunity, through participation, to make environmental issues immediately relevant to young people.

These projects have given the workers an opportunity, through participation, to make environmental issues immed-

iately relevant to young people using the youth club. Hopefully and building on this, the workers will eventually be able to raise the wider issues of the environment such as the deterioration of the ozone layer and the use of chemicals.

Other activities that have taken place in this project have included residential experiences, night exercises in the park with an environmental theme and training courses for youth workers. In Birmingham, Jill Edbrooke is now looking at a photography project which will also aim to make the young people look and think about their environment, as well as raising the self-esteem of the individual. ■

Postscript

Jill Edbrooke, Project Worker in Birmingham adds:

In connection with this work, an eminent environmental educator remarked on the apparent contradiction between spraying wall designs and the threat to the ozone layer. Yet spray can art is part of a complex youth culture and there are serious political and social messages within it. The group would say they didn't paint a mural, they did a piece of spray can art. The designs were carefully thought out to reflect the multi-racial community on the estate and to fit the multiple use of the hall. And the work undertaken by the group enabled us to discuss very personal concerns and feelings.

As a youth worker, I am employed to work with young people – the environment has to be secondary. But most of those I have met are concerned about their environment and wider issues – the missing link seems to me to be self-respect and knowledge of how to act. Simple resources such as the Friends of the Earth's booklet on 'ozone friendly' sprays are far more likely to facilitate action than a negative response to the use of spray cans. ■

Education and regeneration

How can education contribute to the regeneration of declined communites? Celia Clark reports on a Civic Trust initiative which spans formal and informal education.

Celia Clark

Education Officer, Civic Trust

'The whole of the Regeneration Project is an educational process: in order to regenerate the whole community it's necessary to educate it into new solutions.' This is how Jim Lunday, the Civic Trust's Project Officer at Ilfracombe, sums up the vital connection between education and regeneration.

In the decayed, derelict, depressed places where the Civic Trust and other agencies are involved in the process of regeneration of the environment and economy, the claim that education is central to the process might be challenged. Surely employment, reuse of derelict buildings and land, repair of the depredations of vandalism and neglect come first; education has other priorities than focusing on the depressed local area which, through industrial or economic change, has lost its purpose in life.

'Empowerment of the individual is what we're at'. Jim Lunday sees the town as a social phenomenon. Links between the project and the community are needed to tackle people's malaise, apathy and aggression, which are related to the feeling that decisions have always been taken elsewhere. If the regeneration process is to be genuine, deliberate attempts have to be made to reach parts of the community which have never had a chance to influence environmental desision-making before; and this may be done through both formal and informal education.

Of course formal education has different objectives from the regeneration process, but there are points of interface between them. Despite the apparent clash between the imposition of narrow subject boundaries in the National Curriculum and the new style of student-centred project and modular teaching for GCSE and some 'A' levels, there remain many opportunities for environmental education where regeneration is in progress.

Regeneration staff may develop new skills by becoming involved in teaching or INSET work. The link between economic and environmental decision-making becomes apparent. Students' experience and understanding can be enriched and they can learn new skills of participation in planning and design for the community. They may be encouraged to identify and express the needs of the community as part of their courses. The needs of their own age group and those who have just left school are often a priority in regeneration projects: high levels of youth unemployment are an important factor in establishment of a project. If the educationalists regard regeneration positively, schools' equipment and skills can become resources for the whole community.

If the regeneration process is to be genuine, deliberate attempts have to be made to reach parts of the community which have never had a chance to influence environmental decision-making before.

Regeneration and attitudes

The task of the Regeneration Project Officers employed by the Civic Trust or local authorities is herculean. With few resources, they work closely with the community – including local residents' associations, industrialists, the Chamber of Trade, schools, council members and staffs and of course with one of the Civic Trust's network of 1 000 local societies (where there is one) – in helping people to articulate their needs and draw up a programme for regeneration. They work hard at attracting outside investment for new jobs and exploit the links between environmental and economic improvement, building partnerships at local and national level between government, business and voluntary interest. Getting all sections of the local community to believe that the place has a future when blow after blow has fallen – in depressed small towns as well as in inner cities – is in essence a long term exercise in community environmental, economic and political education. For example, Eckington in north Derbyshire has in Project Officer Bob Hawkins's view almost entirely lost its sense of being a special place. 'This sense is an vital ingredient of community self-esteem', he points out, 'and of an awareness of pride of place. Adult apathy towards the quality of the local environment is entrenched and widespread, and could be regarded almost as a form of passive abuse'.

The physical improvements brought about by a regeneration project are extremely

important; but the restoration of buildings, tree planting, landscaping and the like are a fragile veneer unless there is a groundswell of popular support for the improvements themselves and the philosophy which underlies them. Changing adult attitudes is an uphill struggle, even with the support of an enthusiastic Civic Society: helping to shape the ideas of the next generation of adults is, in Bob's view, a more worthwhile and enjoyable exercise.

The restoration of buildings, tree planting, landscaping and the like are a fragile veneer unless there is a groundswell of popular support for the improvements themselves and the philosophy which underlies them.

Eckington Project – Children using Malthouse Farm

Regeneration projects should be prepared to invest heavily in the education of a settlement's children, and should perceive such an initiative as a means of establishing a foundation for their long-term effectiveness. If the children of a community are able to develop an understanding of why the place they live in is special, and why such a thing as a regeneration project is involved in the life of their community, they are more likely to develop a commitment to the special place which is their own.

Developing community resources

Regeneration projects are in a unique position in environmental education. Identifying or developing what resources are available locally for educational purposes, they can initiate physical changes in the environment which also create educational opportunities – if there is some mechanism which offers schools and adult groups the chance to become involved. The Eckington Project, in close collaboration with the community's schools, has set up a study centre where resource materials can be stored and made accessible and new resources developed to meet the environmental needs of the whole community.

Where a county council has social services, education and planning roles it may be possible to develop a community cultural library, photographic archive, oral history exchange, gallery and community history centre, meeting both educational and social objectives of the funding authority.

In most cases, the involvement of regeneration staff in education is sporadic rather than planned, yet a real and early commitment to education as central to the revitalisation processs would strengthen the outcome immeasurably.

Informal education particularly of the adult community – a harder task than working with children – is, in the Civic Trust's view, as vital to regeneration as the involvement of schools. A project with these objectives offers opportunities for growth in depressed people's self-image as well as the development of transferable skills. The VIVA project (Voluntary Initiatives in Vacant Areas of the Newcastle Architecture Workshop for example, enables local groups with few resources to carry out their ideas for environmental improvements. Technical expertise – such as in landscape design – and mechanisms for implementation are offered in a totally open, informal way. 'We couldn't have done it without you, Keith', was a comment a group of Saltmeadows, Gateshead, made to Viva's landscape architect Keith Pimm. *They* had the ideas and he, as a professions, helped them to carry them out.

Consultation

A strong commitment to public consultation by a local planning authority can lead to involvement of pupils in decision-making on live local issues. The London Borough of Haringey has seconded a teacher Pam Travers, based in its planning department, to make links between the borough's services and schools. In response to school curriculum developments, role-play exercises have been devised, for example one relating to the Thames Water Authority's Hornsey waterworks site, involving a conducted site visit, a specially designed teacher pack and school visits by planners. Similar work has been done on the Gestetner site and the New River. Schools are to play a part in the revitalisation of Tottenham High Road – to which they have already contributed an ambitious mural. Students are realising that the council has duties which are affected by political decisions – for example at the Departments of the Environment and Transport. 'They're learning about politics with a capital P, and starting to have an idea about how they can have a voice,' says Pam. Public consultation can be and often is, largely cosmetic in many authorities, but the work in Haringey shows how feelings of powerlessness might be tackled. Students experiencing their surroundings could feel alienation; but if they get involved, feelings of care are generated, creating a sense of place and belonging.

Involving teachers

In new projects, secondment of teachers with a particular liaison and development role to the staff of regeneration projects will do much to ensure integration of the stages of regeneration with the local curriculum, especially in view of the long time-scale of educational planning. In Thorne, north of Doncaster, three project officers share the educational role: Roland Sansom, a planner and Civic Trust Project Officer, Ken Pearce, a seconded teacher and Community Liaison Officer, and a development officer for the Countryside Commission. Local teachers are evaluating and documenting the ways in which the local

environment is already used in education and preparing new strategies with the regeneration staff as the project develops.

In Ilfracombe, teachers play a central role in the regeneration project, making links in their professional roles with the social and physical changes taking place in this once pretty Victorian seaside resort in North Devon, which is not even 'at the end of the line'. Since Beeching's axe fell it has not been on the line at all. Alan Bacon, Warden of Ilfracombe Community School and College, and Jon Bell, Deputy in Charge of Community Education, work with the Civic Trust Project staff to use the local environment right across the teaching curriculum.

CPVE townscape/planning studies taught by Jim Lunday, a town planner and Civic Trust Project Officer, have tested proposals for a multi-storey car park and found them impractical; a sixth form group is to manufacture the distinctive blue and white tiles to replace missing street names. 'A' level Design and Communications include projects on housing, using computer-assisted design. The school's TV studio was used to make videos on 'A Day in the Life of Ilfracombe' and successful advertising for a local firm. The catering department prepared an original Victorian menu and the art department redesigned a shopfront – for the successful Victorian Week, when the whole town recreated the resort of 1888 in costumes, leafy archways across the streets, banquets and events. The idea of the week originated within the college and did much to arouse interest in the town's Victorian heritage. 'The Week created a situation for learning', Alan Bacon says. 'As a result, people were looking at the town, seeing it as beautiful, having to evaluate and spotlight it – and this motivated them to repair shopfronts and take a pride in them'.

Working together

GCSE is encouraging towards process-based learning. This breaks down the '30 kids and one teacher' pattern. Adults Other than Teachers (AOTs) teach in the Ilfracombe school. Alan Bacon regards them as part of his team. Learning is definitely two-way: planners learn what education is up to and what makes communities tick, communities learn what planners, architects, landscape architects can contribute, councillors learn that children and adults have positive ideas on the future of the town, and children learn about some of the processes which shape their environment.

A direct benefit from the collaboration between Ilfracombe Community College and the Civic Trust Project was the emergence of the clear need to replace the existing small youth centre with a more adequate meeting place for young people. Jim Lunday's class helped to develop the architect's brief for the new centre in a converted chapel. The College also played a part in the development of a new industrial estate to counter long-term unemployment.

Conclusion

In the new era of the Education Reform Act and National Curriculum, teachers may feel that opening doors to change in the surrounding community in this way is no longer feasible. Narrower objectives and restrictions on out-of-school learning may tempt teachers to make environmental education an axeable luxury. Yet the social change in all our urban communities and exhortations towards enterprise and self-help are bound to affect educational expectations. Our changing towns should be valued as rich and varied educational and recreational resources, to be nurtured and cherished, rather than vandalised and abused. As Bob Hawkins says: 'A sense of self-value is what all good educationalists try to engender, and a commitment to the place where we live is the missing link in the broken chain of pride of place'.

The author acknowledges the help of those mentioned in the writing of this article. ■

The Southern Examining Group Pilot GCSE 'Environment'

This innovative cross-disciplinary syllabus has been widely acknowledged as an exemplar of one path by which environmental education can infuse the curriculum. Graham Hawkins explains the thinking behind the course, its progress and prospects.

Graham Hawkins

Adviser for Humanities, Somerset.

The context

Since the 1960s there has been an increasing awareness among educationists of the valid claims on the curriculum made by environmentalists. But persuading the guardians of monolithic subject areas to embrace more environmental perspectives has proved a difficult task. The bastion of the examination system has inevitably been blamed as the principal constraint on progress because of the resistance to change of the content of the traditional subjects. This situation has not been improved by the onslaught of the National Curriculum and a tightly defined system of national testing at ages 7,11,14 and 16.

The other path by which environmental education could reach the curriculum was for its exponents to claim it had the status of a new subject discipline with a distinct body of knowledge. This route spawned 'environmental studies', 'environmental science' and 'rural science'. Though these had many commendable features, they suffered from the educational orthodoxy of a strict hierarchy of subject status. In a so-called 'option' system already bursting at the seams, they were regarded as suitable for less able students – inferior to 'real' subjects such as physics and history.

Towards the end of the seventies and into the eighties, the seemingly unbreakable hold of traditional perspectives began to weaken, concepts such as an 'entitlement curriculum' gained currency, and even the National Curriculum identifies several cross-curricular themes that must be present along with 'Core' and 'Foundation' subjects. But what sort of environmental education element should there be in an entitlement curriculum? Should it be *across the curriculum* with each subject or module having an environmental leaning, or should it be more overtly present in a *linkage* with humanities or science, or could it exist as an identifiable strand or *set of modules* in its own right, not a discipline or 'subject', but a skills-based course complementary to the other curricular elements? The pilot 'Environment' syllabus of the Southern Examining Group set out to fulfill the latter role.

Establishing the syllabus

The idea for it was born in 1982 when Rex Beddis, the Senior Humanities Advisor for Avon,

was invited by the Future Curriculum Trends Working Party of the Southern Examining Group to prepare some proposals for an environment programme for the 1990s. A team of specialists from a wide range of disciplines was convened and evolved the framework of the 'Environment' syllabus. When the proposals for the GCSE were announced, it was decided that it would be appropriate to develop the syllabus with a view to its being accepted for an examination in 1988 under the new common system. During 1985, it was proposed that the syllabus should be submitted for joint CSE and GCE 'O' Level certification in 1987 so that it could be offered as a strand of the common curriculum being implemented at Dartmouth Community College in Devon in 1985.

The proposal was accepted and the necessary approvals were secured for 'Environment' to become a pilot GCSE with joint certification. At the same time Hardenhuish and Sheldon Schools in Chippenham, and George Ward School in Melksham adopted the syllabus as part of their TVEI programme, as did Henbury School, Bristol as a one-year sixth form course. Whitefield Fishponds and Gordano Schools in Avon joined the Pilot in 1988.

A problem with any syllabus which includes the word 'environment' in its title is that it is often perceived as being 'just' geography with some biology thrown in. But 'Environment' is far from this. Certainly it has its emphasis on people and places and the way in which the two interact from a local to a global level, in the past, present and future. But it is not just a new selection of 'content' to be taught in a more or less traditional way. Rather, it is designed to aquaint students with a range of environmental learning processes which draws on every discipline and embraces each of the nine 'areas of experience' proposed by HMI, in a truly integrated way.

The environmental learning processes central to 'Environment' are intended to:

1 Stimulate the development in students of a heightened AWARENESS and sensitivity to a variety of environments through direct experience.

2 Encourage a personal RESPONSE to environment and the communication of that response to others through a variety of media.

3 Lead students to select the KNOWLEDGE required to come to a fuller understanding of environmental issues.

4 Develop in students a feeling of personal CONCERN and RESPONSIBILITY for the environment.

5 Provide students with the necessary critical skills and awareness of decision-making processes to be able to PARTICIPATE effectively in those processes.

The syllabus

The syllabus offers a detailed guide to the concepts and experiences to which students should be exposed. It may be summarised as follows:

Observing and Experiencing Places

1 All people are affected by places in a variety of ways and circumstances.

2 People communicate their observation of, and feelings about, places to others.

3 Distorted images of places may be deliberately presented.

4 Future places may be imagined, predicted and planned.

Environment and Behaviour

1 Human activity and behaviour is strongly influenced by the physical and biological characteristics of environments.

2 Human behaviour is also influenced by the behaviour and expectations of others.

3 Change is a feature of all environments, and behaviour is affected by environmental change.

Using, Managing and Making Environments

1 Many environments are the result of unregulated and unplanned human activity, both in the past and in the present time.

2 Managing, designing and making environments is normally a complex activity involving many people.

3 The consequences of efforts to use, manage and make environments may be beneficial or harmful to the environments and people who depend on them.

Ownership and Politics of Environments

1 Places are owned and/or managed by individuals or groups.

2 Individuals and groups have authoraty and/or power to determine what happens in or to places they own or manage.

Assessment

'Environment' is very much about personal and group experience and the themes listed above presented a challenge to the syllabus planners to find suitable assessment techniques. To reflect the themes, a set of assessment objectives was drawn up which require that students should show an ability to:

1 Observe a place directly, and record and present original data about that place in detached, objective ways.

2 Research and present a range of background material about a place.

3 Interpret data produced by direct observation and recognise its nature and limitations.

4 Interpret a range of background materials about a place, and recognise its nature and limitations.

5 Express feelings about a place.

6 Analyse personal feelings about a place.

7 Communicate an image of a place through the selection and development of an appropriate technique or techniques.

8 Identify and describe a local environment issue.

9 Recognise the wide variety of viewpoints held about an environmental issue and emphasise with others in their interaction with the environment.

10 Show a knowledge and understanding of the work of professionals, policy makers and others involved in an environmental issue, and of the processes involved in environmental management.

11 Communicate a personal response to an environmental issue.

12 Organise and present in appropriate media, material relating to a local environmental issue.

13 Understand the processes involved in the design and development of places.

14 Suggest and evaluate possible solutions to a design brief.

15 Present a solution to a design brief.

16 Identify and describe a global environmental issue.

17 Organise and present in appropriate media, material relating to a global issue, demonstrating an understanding of its global scale and implications.

18 Interpret background material relating to a global environmental issue and recognise its nature and limitations.

19 Show an understanding of the ideas in the syllabus under examination conditions.

The current assessment pattern of the pilot comprises a 20% summative exercise and 80% coursework. The summative exercise is an extended piece of work based on a collection of resources related to an environmental issue and executed in supervised conditions. The coursework element comprises four equally weighted units:

1 The Description of and Response to Place

This unit requires the collection, interpretation and presentation of data relating to a place and the expression and analysis of the candidate's own feelings about it.

2 The Investigation and Evaluation of a Local Environmental Issue

This unit requires the description of a local environmental issue, the presentation of a study of the views and interaction of the interest groups

involved, and the expression of a reasoned personal viewpoint.

3 Environmental Design
This unit requires candidates to respond to an environmental design brief, to conduct surveys and documentary searches, and to present and evaluate alternative solutions to the brief.

4 The Investigation and Evaluation of a Global Environmental Issue
This unit requires a similar study to the local environmental issue but taking a global perspective.

The relationship between the assessment pattern and assessment objectives is shown in the table below:

	ASSESSMENT OBJECTIVES						
COURSEWORK UNIT 1	1	2	3	4	5	6	7
COURSEWORK UNIT 2	8	9	10	11	12		
COURSEWORK UNIT 3	1	2	13	14	15		
COURSEWORK UNIT 4	16	9	10	11	17		
SUMMATIVE EXERCISE	18	9	19				

The Environment course at Dartmouth Community College

Dartmouth Community College is an 11-16 mixed comprehensive of 400 students serving a town of 6 500 and its surrounding villages on the south coast of Devon.

Clearly, the successful implementation of the 'Environment' course depends on overcoming the practical constraints of curriculum design and timetabling. At Dartmouth a 100% common curriculum has been adopted with ten interrelated strands of which one is 'Environment'. The timetable has a cycle of ten days and each day has three 90 minite modules, two before lunch and one after. The timetable is blocked so that the year group is always studying within the same curricular strand at the same time. The implication of this for 'Environment' is that a stable team of teachers from a wide variety of subject backgrounds can operate together with a whole year group and teach an optimum pattern of periods. The pattern chosen is one morning (2 periods) and one half morning (one period) per fortnight, although it would have been possible to allocate a whole day (3 periods). The clear advantage of this arrangement is that the outdoor work can be organised efficiently on a regular basis and with no disruption to other teachers or classes.

The team of teachers comes from a variety of subject backgrounds including mathematics, history, geography, science and languages, which sustains the orginal perception of the course as truly cross-disciplinary. Each is able to contribute his or her own expertise with confidence. Dartmouth is fortunate in being able to deploy a full teaching team, but even in schools with a one teacher 'team' it should be possible – if whole-school curriculum design is to have any meaning at all – to draw on the advice and resources of colleagues. In the future, teachers new to the syllabus will be helped by a new Teachers' Guide containing advice on methodology and resources, exemplar material and case studies.

Having an inspiring syllabus is one thing, implementing it in practical terms is another. Fortunately, there is plenty of excellent work being done which influences Dartmouth's approach. Coursework Unit One requires candidates to submit eight short pieces of work involving the investigation of places, each using one technique, and one longer piece communicating a personal response to a place using a variety of techniques. These activities are designed to heighten the individual's awareness of environment, and have drawn on the Earth Education techniques described by Steve van Matre in his books *Acclimatization*, *Acclimatizing* and *Sunship Earth*, as well as those proposed in the Schools Council Project 'Art and the Built Environment'. Much has also been learnt about methodology from the regular environmental conferences and courses held during the last years, in particular the Anglo-French Environmental Education Courses organised by the DES.

The introduction of Coursework Unit Two requires the application of a number of techniques developed in the first Unit to the study of a controversial local environmental issue. These include social surveys, questionnaires, interviews, formal letter writing and the analysis of newspaper articles and other writing likely to contain partisan viewpoints. Issues studied have included pollution in the River Dart, parking provision in Dartmouth, a planned deep water harbour in the estuary, and the provision of facilities for sports, and the arts.

Coursework Three is a response to a design brief for the provision of a new Sports Centre within the grounds of the Community College, or for the provision of a multi-function leisure park in the town including facilities for children and the disabled. Very

SEG 'Environment' course at Dartmouth College

detailed specifications are given and detailed surveys and research is required to make a fully satisfactory response.

Coursework Unit Four broadens the scope of the environmental response from the local to the global scale. The investigation of such issues as acid rain, nuclear waste disposal and whaling, introduce students to national and international agencies and the difficult task of evaluating opposing viewpoints which are backed by considerably more research than those found at a local level.

The summative examination is designed to test the ideas of the syllabus by enabling the students to demonstrate the skills learnt and an understanding of the concepts. In 1988 a series of documents, photographs and a video concerned with nuclear energy were presented to the candidates. They were required to analyse these at a number of levels, a full critical exposition being required for the highest marks.

Evaluating the course

Despite some initial scepticism on the part of the students and parents, the syllabus has certainly been an educational success. Students consider that it has made them more articulate and capable of dealing with other people and organisations. Above all it has made them considerably more aware of the complexity and import of environmental issues, a development often remarked upon by visiting environmental professionals, councillors and the local MP. Most students have expressed a desire to become more practically involved in the resolution of environmental issues.

It has made students considerably more aware of the complexity and import of environmental issues.

Much practical experience has been gained in the teaching of this syllabus. Teachers and students have learnt to handle what is essentially an independent learning situation with the teacher taking the role of tutor. Clearly, there are still elements to be improved, not least in the area of assessment. Clarification is needed of the relationship between assessments carried out in the College, moderation and the final decisions of the examination boards on grading.

The role and validity of new techniques such as group presentations, study dossiers, and vivas, need to be evaluated carefully. Above all, ways must be found to reflect in the ultimate grades awarded, the educational processes through which a candidiate has passed successfully – for the truism that education is about process as well as product has never been more apt than in relation to the 'Environment' syllabus.

The future

Although the immediate future of GCSE 'Environment' is secure, with the onward march of the National Curriculum, national testing and attainment targets, and the squeeze being exerted by the 'Core' subjects, its long-term future is unclear. Even the ability of geography and history to sustain themselves as 100% CGSEs is in doubt, so the possibility that 'Environment' will only slowly gain ground must be considered. But the picture is not all gloom. The very cross-disciplinary foundations of the syllabus make it suitable for modularisation. Modules based on the coursework units would comply with GCSE national criteria for specific National Curriculum Core and Foundation subjects.

But if modularisation is pursued, sight must not be lost of the aims of the designers of 'Environment' who conceived the package as a progressive whole. It must be the task of all schools to begin to design their curriculum as a total map, not a series of disjointed parts. These maps must deliver not only the main subjects but also the cross-curricular themes such as environmental awareness, economic awareness and political literacy, and address the criteria of the local TVEI Extension schemes. The 'Environment' modules will provide indispensable elements for the construction of these maps.

Further information about the 'Environment' syllabus may be obtained from The Southern Examining Group, Stag Hill House, Guildford, GU2 SXJ; or about the implementation at Dartmouth from Joanna Evans, Dartmouth Community College, Milton Lane, Dartmouth, TQ6 9HW. ■

A Diploma in Environmental Education for Somerset teachers

Roy Rendell explains how in-service environmental education in Somerset has led to the development of an innovative diploma course.

Roy Rendell

County Adviser for Environmental Education

The Diploma in Environmental Education is rooted in developments which were set in motion in the county in the early '80s. At that time it was decided to substantially reduce the number of one-off meetings and short courses which, although sometimes useful, were often very poorly supported and because they tended to arise in a rather ad hoc manner, seemed merely to nibble at environmental education.

The shorter courses retained were intended to introduce teachers to the potential of their own locality and to help them to begin investigating and using it. They later became known as Landscape Courses and were taken over by the Environmental Education Primary Support Team who are now entirely responsible for planning and delivering them.

Meanwhile, emphasis was placed on developing a course of some considerable duration and one leading to a worthwhile qualification. It was felt that through such a longer course teachers would experience extended exposure to the philosophy and methodology of environmental education. Further, by increasing their understanding of and experience in the environment, and thus building their confidence, it would almost inevitably make a significant impact on their teaching.

Starting a Certificate course

These needs and ideas were discussed with John Griffiths, a Senior Lecturer in the Education Department of Bristol Polytechnic, who at that time, was the Director of a Certificate in Advanced Professional Studies in Education (CAPSE) course which had been set up at the request of my science colleague and to which I had been invited to make several contributions.

We soon realised that a similar course in Environmental Education was quite feasible and by the spring of 1982 a sub-

mission for a CAPSE (Environmental Education) course had been approved by HMI and the DES and validated by the Polytechnic. Assessment was to be by means of written assignments, initially three but later reduced to two. In the autumn of that year 24 teachers, each with at least the required minimum of two years' experience, enrolled for the first of these skills/process-based courses. Although planned for teachers of 5-13 year olds, recruitment soon determined that the course should be geared to those teaching children of primary age. Regrettably, because of the level of funding available, day release and supply cover could not be considered. It was, therefore, necessary to run a course on the basis of 30 x 2.5 hour Thursday evening sessions spread over three terms. There were also two residential weekends, one at the beginning of the course and the other very near the end, both held at Somerset Outdoor Education Centres.

These weekends have proved to be a tremendous value, firstly in setting the scene and jelling the group, and secondly in providing opportunities in the field for individuals and small groups to pursue investigations in which they can draw upon experiences gained through the course. Attendance throughout has been exceptionally high and teacher goodwill has been a major factor in the subsequent success of these courses which have been completed entirely in course members' own time. The total cost of the 90+ hour package amounts to no more than the equivalent of three supply days per course member.

Although content has been regularly reviewed and, where necessary, modified to reflect national trends or local needs and interests, the CAPSE (EE 5-11) course has entered its seventh year with basically its original structure. The Landscape Courses, previously mentioned, have become increasingly valuable as an introduction and in encouraging recruitment to it. By the end of the present school year, 150 teachers will have completed the course. Although some of them have since left the county and others have changed schools, 89 or 35% of the 251 Somerset schools with primary-aged children currently have one or more members of staff who have attended the CAPSE (EE 5-11) course. The contribution of the three Primary Support Teachers in both back-up and aftercare has become increasingly important.

It became clear that a significant number of course members had had their appetites whetted and were both interested in and capable of further, more advanced study in the field of environmental education.

In the early years of the course it became clear that a significant number of course members had had their appetites whetted and were both interested in and capable of further, more advanced, study in the field of environmental education. It was then that John Griffiths and I once again put our heads together and the idea of an environmental education course at diploma level was conceived.

Planning the Diploma

In July 1987, by which time our thoughts and ideas were well-advanced, a meeting of teachers was held at the Somerset Education Centre in Bridgwater to take a general look at environmental education in the county. All CAPSE course members were invited and over 70 attended. An ideal forum to introduce and sound out support for a diploma course was thus available. There was clearly considerable interest in the idea and, to foster this, it was decided to initiate a termly newsletter and to establish area groups which would meet regularly. Towards the end of the year other LEA advisers were made aware of the proposals during the annual conference of SW Advisers held at Leeson House Field Studies Centre in Dorset. Again there was genuine interest in the information given.

In confident anticipation of these responses a Course Planning Team, drawn up from within the Education Department but supplemented by representatives of other polytechnic Departments, had already been set up and continued to meet on a regular basis through the next nine months or so. The resulting submission was eventually validated during the summer of 1988 and the course commenced this autumn.

The Diploma course is open to teachers who have successfully completed a CAPSE (EE 5-11) course and have had subsequent experience of at leat one year to reflect upon the CAPSE course and to put into practice some of its ideas. The CAPSE course does in fact count as a 90 hour module in the total diploma package of 360 hours. Exceptionally a teacher with other relevant experience and qualifications might be accepted. This leaves the door open for primary teachers from other countries where the CAPSE (EE 5-11) is not available and to a small number of secondary teachers for whom, because of their limited opportunities for cross-curriculum work, such a course has not so far been considered viable.

Although the Diploma course builds on CAPSE it is mainly concerned with study of the increased depth and intensity appropriate to such a qualification. The first part of the course, consisting of a series of taught units each of 30 hours, extends over six terms (ie 2 academic years). During that time a 3 hour evening session is held each week for 10 weeks of each term, thus ensuring that one unit will be completed each term.

The units are as follows:

1 Diploma Orientation
Teachers are enabled to reflect upon the CAPSE (EE 5-11) course, on their subseqent experience and on their present position, and, by sampling the course as a whole, to appreciate the level of commitment and standard of work required for a diploma.

2 Curriculum Theory
Bearing in mind that some may have begun to move into a 'specialist' and/or management role within their schools, teachers are encouraged to take a broad look at the curriculum, examining current theories and developments, considering factors which influence the curriculum and curriculum planning, looking at the problems and advantages of cross-curriculum approaches, and examining critically the curriculum within their own schools.

3 Issues in Environmental Education
This double unit (ie 60 hours), the central core of the course, commences with an introduction to the concept of an ecosystem and the importance of conservation in responsible environmental management. A selection of essentially topical environmental issues ranging from local to worldwide are then explored. Consideration is given to economic and political pressures, and to values, attitudes and ideologies, as well as to 'when' and 'how' specific issues might be introduced in school. Course members are encouraged to contribute according to their own background, interests and expertise.

4 Implementation Strategies
Consideration is given, against a background of the curriculum as a whole, to some of the environmental education strategies currently in use locally, at county level, and elsewhere. Each course member is then asked to devise a full, detailed and relevant environmental education policy for his or her own school.

5 Teacher as Researcher
In this unit course members look at the issues and procedures involved in small scale research, learning how to enquire, analyse and present their enquiries in preparation for the empirical research project which follows.

The last non-contact part of the course, consisting of a dissertation, extends over two terms. This should provide a link between the overall course content and each teacher's personal development. It will be a substantial piece of individual independent study, normally of 10 000 words in length, on a topic chosen by the teacher but approved by the Polytechnic. Tutorial guidance is essential. Assessment is by means of four written assignments during the taught part of the course and the final dissertation.

Looking at progress

It is clearly far too soon to attempt any kind of evaluation but there is some satisfaction from progress to date. Somerset teachers now have a clearly defined and attractive 'through route' for in-service in environmental education which, as a result, can be considered alongside some of the well-established and financially more favoured mainstream subjects. In consequence, its image in the county continues to improve and interest and involvement are widely spread, being reflected in the work undertaken both in schools and at each of Somerset's four Outdoor Education Centres.

In retrospect, it would have been a great advantage to have established the present structure much earlier, certainly before the National Curriculum was first mooted. There can be no doubt that the subject-orientated nature of the latter, which pays no regard to the importance of environmental education, has been a most unhelpful background against which to recruit for the Diploma Course.

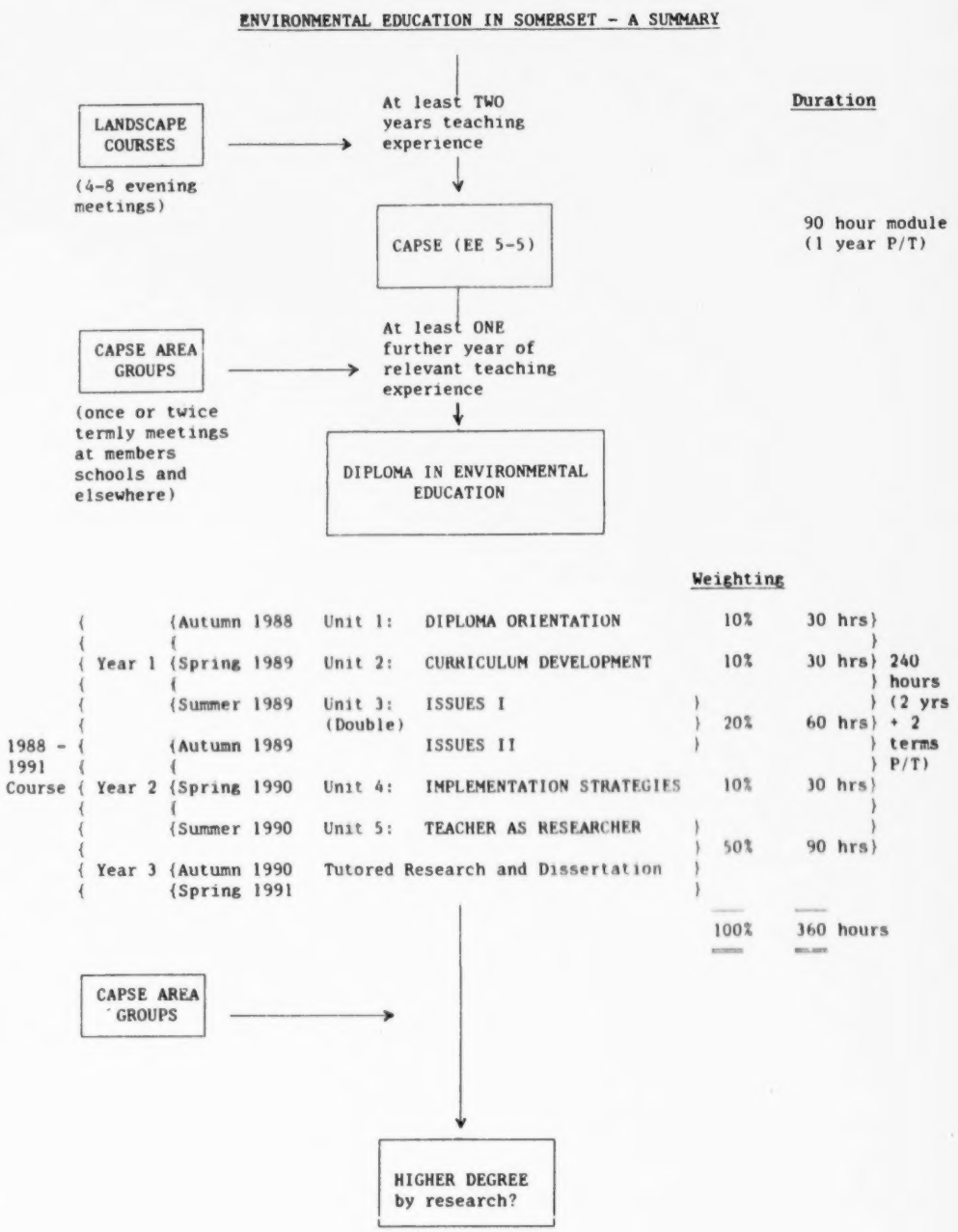
Other disincentives, some of which had been anticipated, include:

1 The great difficulty teachers have found in making a commitment to a course lasting for more than two and a half years. In retrospect, two evenings a week for one year followed by the two-term dissertion might have proved more attractive.

2 The fact that the course is regarded by some as one for the 'subject specialist'. It therefore might seem less relevant than a broader-based B Ed or Dip Ed course for many seeking promotion.

3 The large amount of travel at the end of a school day which is inevitable in any country-wide course. In a sparsely populated county like Somerset, which has no large centres of population, only a minority will be near the chosen venue.

4 The introduction of directed time and the effect of this and other changes on the climate within the profession. Recently teachers have become much more discriminating in the way they use their own time. Nevertheless fourteen teachers enrolled for this year's course which promises to be a challenging but rewarding experience for all concerned. No doubt a great deal will have been learnt before the next course begins, probably in 1991. ■


ENVIRONMENTAL EDUCATION IN SOMERSET - A SUMMARY
LANDSCAPE COURSES
(4-8 evening meetings)
At least TWO years teaching experience
Duration
CAPSE (EE 5-5)
90 hour module (1 year P/T)
CAPSE AREA GROUPS
(once or twice termly meetings at members schools and elsewhere)
At least ONE further year of relevant teaching experience
DIPLOMA IN ENVIRONMENTAL EDUCATION
Weighting
1988 - 1991 Course
Year 1 Autumn 1988 Unit 1: DIPLOMA ORIENTATION 10% 30 hrs
Year 1 Spring 1989 Unit 2: CURRICULUM DEVELOPMENT 10% 30 hrs
240 hours (2 yrs + 2 terms P/T)
Year 1 Summer 1989 Unit 3: ISSUES I (Double) 20% 60 hrs
Year 1 Autumn 1989 ISSUES II
Year 2 Spring 1990 Unit 4: IMPLEMENTATION STRATEGIES 10% 30 hrs
Year 2 Summer 1990 Unit 5: TEACHER AS RESEARCHER
Year 3 Autumn 1990 Tutored Research and Dissertation 50% 90 hrs
Year 3 Spring 1991
100% 360 hours
CAPSE AREA GROUPS
HIGHER DEGREE by research?

Who is paying for environmental education?

Organisations still play a leading role in promoting environmental education, but this work depends on funds. John Baines takes a critical look at their funding over recent years and looks at the role of industrial sponsorship in the years ahead.

John Baines
Director of CEE (to end of 1988)

Behind every environmental education programme that gets off the ground, there is a fund raiser. Whether it is a half-day in-service training course or a three-year development project, someone has had to sell the idea to those who control the purse strings.

Although the movement is raising more money than ever before, more is always needed – to keep up with the demand for established services like the provision of information, as well as for new programmes that can capitalise on the growing interest in the environment. Fortunately, environmental education is in fashion and money is available for projects if they can be sold successfully to potential sponsors. Government has indicated that industry and individuals are expected to contribute more to the activities of voluntary organisations, and it is to industry in particular that organisations are turning for support. This presents opportunities to develop new programmes, but it also raises dilemmas for education that we have not had to face before.

Established sources

Ten years ago, when I became Director of CEE, the major sources of funds for environmental education were government, local education authorities and charitable trusts. Government support was given as core funding to very few national organisations at first, but was extended with the Department of the Environment's Small Grants Scheme to include most of the major organisations. The Department of Education and Science, while not funding formal education initiatives, did support youth work. Once the money was approved by the donors, there was no attempt to control the activities of the organisation – merely an interested observation. Recently, government has drawn back from providing general funds, and is introducing grants for specific projects within an organisation's programme. This presents opportunities for government to exercise more control over an organisation's activities, although in environmental education this does not yet seem to have happened.

Local education authority support for environmental education has been mainly channelled into locally-based initiatives, especially field studies and training. I have always been impressed by the vision of local authorities of all political persuasions in supporting CEE, a national body providing a framework within which the movement as a whole can operate. It is a measure of their commitment to the concept of environmental education that this support has increased over a period marked by restrictions to local authority spending. However, will the transfer of financial control to individual schools make it increasingly difficult for education authorities to allocate funds to authority run field centres, or to national bodies like CEE?

The other major source of support in the early years of environmental education was from the charitable trusts like the Leverhulme Trust, Ernest Cooke Trust and the Dulverton Trust. While funding is still available from these sources, it does not seem to be on the scale it was – or perhaps it is just spread more thinly.

Of the two statutory environmental bodies, the Nature Conservancy Council (NCC) and the Countryside Commission, the NCC has done most to encourage environmental education. As well as setting up its own education section, it has provided support for a number of initiatives including the development of school grounds for environmental education. It also gives grants to numerous organisations to help them carry out their activities, for example CEE's Youth and Environment Project. The Countryside Commission has been less involved in formal education activities, but has given considerable support for training courses.

A feature of most of this non-industrial funding is that the sponsors do not seek a high publicity profile nor influence the development of the programmes.

Environmental organisations have also channelled resources into environmental education, but mainly for their own programmes and linked to their own particular interest. Some, like the Royal Society for the Protection of Birds (RSPB), the Royal Institute of British Architects (RIBA) and the Royal Society for Nature Conservation (RSNC) support their own educational sections, although money for individual activities may be raised from outside sponsors. Of the environmental organisations supporting environmental education programmes, two deserve special mention for developing broader based programmes. The World Wide Fund for Nature (WWF) Education Department has concentrated on the development of projects which span the school curriculum and encompass the broad aims of environmental education rather than reflecting the more specific aims of WWF itself. WATCH, promoted by RSNC, also has a

broad based education programme which encourages young people to become actively involved in learning about the environment.

For the time being, the sources mentioned above seem unlikely to be able to increase substantially their support for environmental education. In fact, there is some indication from government of a lessening commitment to environmental education. For example, Rupert Booth has not been replaced with a full-time appointment at the Inspectorate in DES. It is to be hoped that Mrs Thatcher's words of support for environmental protection will be translated into action. In the future, however, the movement is likely to be turning more and more to industry for the extra funds that are needed.

Looking to industry

Environmental education organisations have recognised the potential of this source and there are many examples of co-operation. Industry too seems very willing to support education programmes. However, the amounts are still quite small and have generally been directed at specific projects through which the industry itself gets a lot publicity. Indeed, the projects generally have to produce 'value for money' in these terms. It is enlightening to be told that a project has been turned down, not through lack of quality or importance but because it is not new, or because the same amount of money could sponsor a national lecture and attract more publicity.

This aspect of sponsorship raises many issues for educationists. While direct advertising by companies is not permissible in education materials, their logo and an acknowledgement generally appear and these can be taken by the users to indicate endorsement of thecompany by the organisation concerned. Many teachers are reluctant to accept that such materials are unbiased and their educational value can be diminished as a result.

However, at least the teacher can see that there may be bias. At a recent meeting at a so-called independent publisher, I came across something far more worrying. Well presented books are expensive to produce and sell at a competitive price. In this case, the publisher announced that he intended to contact industries and offer to use illustrations of their products and to include case studies that were favourable to them; but for a price. This back-door sponsorship is not necessarily acknowledged and the teachers may be unaware of the vested interests that have helped pay for the book. This cannot be good for education.

However, there are signs that the attitudes of industry are open to change and this should be encouraged. Two examples are provided by CEE's recent experience. In 1987, CEE was commissioned by the Central Electricity Generating Board (CEGB) to identify an area of environmental education which could benefit most from its financial support. Following some research, CEE suggested that teacher training should be the focus of the programme and recommended the development of a number of modules which could be used for the in-school, in-service training days. This project now has funding for two years and is being developed in association with selected local education authorities and training establishments.

The second example relates to the recent review of CEE by a firm of independent management consultants. Following the publication of the report, British Petroleum discussed with the Director the staffing implications of the recommendations. High on the list of priorities was an administrative bursar who could release the Director from many of the administrative tasks that were absorbing too much of his time. This post is now funded by BP for two years.

These industries have worked with an organisation to identify educational and organisational needs. They have followed this up with financial support to enable these needs to be met.

In the long term, I feel sure that their credibility within the environmental education movement will benefit much more than if there had been support for more marginal, but higher profile activities linked more closely to their own interests and concerns.

Recently, another trend has also become evident and it is one I do not feel so happy about. Many industries have recognised the importance of education in shaping young peoples' perception of the world about them and wish to get environmental issues relevant to their industry's interests included in the new national curriculum. Lacking the expertise themselves, they are asking environmental education organisations to tender for the development of educational programmes that meet certain criteria. In search of much needed funds, the organisations are offering to undertake the work even though it means postponing projects which they may previously have considered to be more important.

I hope industrial and other concerns will follow the example of the CEGB and BP and work with the environmental education organisations to meet real educational and organisational needs. I also hope they will increase the amount of their donations to reflect the higher profits that industry has been making.

The environmental education movement has not developed any co-operative fund raising strategy.

These profits are after all dependent upon using the environment and labour of the local community. Now that donations can be set against tax, is it too much to ask that 1% of pre-tax profits are fed back into the environment and the community?

An adequate strategy for adequate funding?

Despite being so dependent upon raising funds, the environmental education movement has not developed any co-operative fund raising strategy.

Organisations and individuals tend to develop their own contacts and guard them jealously to prevent others from 'poaching'. This, I suppose, is a strategy of kinds, but it does mean that there is no coherent view of where the money is coming from. I hesitate to ask organisations and individuals to declare their sources of funding and the amounts they receive, but it could be worthwhile to have an overview of how environmental education is funded. Piecemeal funding and competition for resources is not a promising basis from which those in the environmental education movement can provide a coherent and strong service and meet increasing demand. If environmental education is the central concern we say it is, then we cannot afford anything less than a co-operative drive for adequate funding. If others feel the same, I would be happy to know and provide an opportunity to plan for a higher fund-raising profile. ■

Environmental education, CP and ET

Monica Hale assesses the contribution of MSC funded Community Programmes to environmental education and the likely effects of the introduction of Employment Training.

Monica Hale

Former Manager, Urban Spaces Scheme

September 1988 may come to be remembered as a bleak month for those involved in Community Programme (CP) schemes, for this was the month that CP was replaced by the new government initiative for the long-term unemployed amalgamating all previous schemes under the Employment Training initiative (ET).[1]

The Community Programme was introduced in 1982 as a means of helping the long-term unemployed prepare for permanent employment through work experience and training on projects of benefit to the local community. Despite its well-publicised inadequacies, the Community Programme became popular amongst the recipients of its services, its sponsors and participants. Many of the latter subsequently found employment or went on to further training or education.

Through a number of specialist projects the programme made a substantial contribution nationally to the development and wider dissemination of environmental education at all levels. It has been estimated that under the Community Programme a total of £10 million was directed into creating 2 300 jobs in environmental and conservation work, of which approximately 11% were related to environmental education.[2] These will be mostly lost due to the altered conditions brought about by the new scheme.

With the changes imposed by the replacement of the Community Programme by Employment Training (now firmly in place) it is timely to evaluate a programme which became increasingly involved in work covering a broad range of environmentally oriented areas and which represented an unprecedented injection of government funds into environmental projects.

The Community Programme

From 1982 the Manpower Services Commission sponsored the Community Programme with the dual objectives of :

- providing training and work experience to enable the long-term unemployed to enter permanent jobs;
- providing work in areas of need for the benefit of the community.

Running a successful CP scheme was not an easy undertaking and required a high level of managerial, organisational and pastoral skills. Project management proved challenging for those with little or no experience due to the unusual working environment. The part-time nature of the majority of the posts, the transitory character of the workforce and the funding in 52 week bursts were some of the difficulties not generally encountered in more structurally stable situations. Occasionally difficulties arose in some organisations where the employment training and job creating aims of the MSC may not have been compatible with the objectives of the sponsor or the project.[3,4] It is therefore all the more remarkable under these circumstances that projects were often able to deliver a good quality product and beneficial experience for participants.

The emphasis on work experience backed up with training (up to one third of a participant's time) was a primary factor in the successful formula for CP schemes. Interestingly these priorities are reversed in the Employment Training scheme, which lays the emphasis on training in *basic* skills, in particular, literacy and numeracy. It is questionable as to how valuable this type of scheme will be, especially for the more able and graduates.

The contribution of CP To environmental education

It is difficult to give a precise evauluation of what CP gave to environmentally related projects. Each of the projects differed in their main objectives, their method of working and the level of success they achieved.

However, during a time when resourcing and support for teachers – especially for those with little previous experience of environmental work – was notably inadequate, the support CP projects were able to give teachers cannot be underestimated. During the years that the Community Programme operated, direct assistance was provided to hundreds of schools and numerous LEAs to implement environmental programmes of work on a large scale.[5]

Most of the effective CP schemes worked in partnership with the recipients of their services. This was necessary as CP projects employed graduate staff possessing knowledge in conservation and ecology but little or no practical teaching experience. The teacher's input was thus necessary to ensure the work programmes and projects were suited to particular classes in terms of level and presentation of materials. In addition working together aided the translation of the various ideas and topics into schemes of work.

The partnership between teachers and the external agency ensured the broader educational aims could be met; the integration of the separate subjects and the aquisition of a range of skills. Equally important was the production of up-to-date trialled materials in a readily understandable and usable form. Without the financial support of the MSC it would have been difficult, if not impossible, for this type of service to have been operated by an independent agency to LEAs. Thus, the CP schemes provided what amounted to a personal advisory service to schools.

CP schemes provided what amounted to a personal advisory service to schools.

The achievement of MSC objectives

There is no doubt that CP schemes in environmental education met their objectives both with regard to community benefit and assisting participants into employment or further training. Indeed, it is not exaggerating to say that some of these schemes were amongst the most successful of the Community Programme overall. The Urban Spaces Scheme for example saw 88% of its staff go on to permanent employment or training, 30% of whom (nearly all science graduates) entered the teaching profession. This compares with a national average of only 26% of participants entering permanent employment from all CP schemes.

The Employment Training Programme

Employment Training provides for an individually programmed training plan, which includes approxiamately 40% directed training to gain certificated qualifications and work experience on a project, before being moved on to 'train' with a local employer.[7,8] To qualify for a training place, unemployment eligibility criteria similar to those operated under CP must be met.

ET is intended to handle an increased number of participants (supposedly for half the time – 6 months per trainee) with no additional funding, and the emphasis is on basic needs training for those with little or no marketable skills. This is primarily to allow channelling of the long-term unemployed into mainly manual and low skill areas of the employment market. The type of training that CP schemes were providing to a specialist skills or graduate intake were therefore not suitable for ET.

The basis of ET is that trainees drawn from the long-term unemployed are directed to an Area Training Agent (ATA) from the Job Centre or Restart interview for up to six days of assessment and counselling. This results in a 'personal action plan' of training requirements based on the needs of the local job market and that of the individual. The ATA then arranges for the trainees to go to an Area Training Manager (ATM) who implements the personal action plan. The ATM can roughly be equated with the former CP projects although their remit is now radically altered.

USS staff build a pond! St Michael's School, Highgate

Funding for ATAs is by a fixed sum of £35 per trainee 'processed'. Most ATAs are being established with outside financial assistance, largely from industry. Nominal funding for ATMs is provided by the Training Commission on the basis of each *filled* place. This makes the financial basis for ATMs precarious as the supply of trainees is subject to market availability and the ability of ATAs (who supply the trainees and over whom ATMs can excercise no control) to deliver. This compares unfavourably with CP, where sponsors were responsible for their own recruitment. ATMs are expected to make a substantial investment in facilities.

USS staff and teachers from ILEA schools – participating in a USS organized INSET course on freshwater ecology in an urban environment location: Gillespie Road Natural Park, Islington.

The Impact of ET on existing environmental CP Schemes

With the publication of the White Paper on Employment Training in February 1988, existing agencies and projects were required to bid for places under the new scheme and detail the type of training, project experience and work placements they would be offering to trainees.

Many organisations (such as the Urban Wildlife Group, Centre for Urban Ecology and Shropshire Trust for Nature Conservation) involved in providing environmental education services under the Community Programme found they could not operate within the financial and other constraints demanded by the Training Commission and opted out at an early stage. Some environmental organisations had their bids for ET turned down, while others chose to scale down and/or become providers of project-based training. A considerable number of projects have had to close down completely or to rely on volunteers.

Some organisations have joined together in consortia to participate in ET, and these have met with varying degrees of success, ranging from outright rejection by the Training Commission to acceptance on the basis of a reduction in pro-posed numbers. The limited number of ET specified 'science' places (compared with those allowable under CP) for which training in environmental education may be delivered, has caused severe problems for environmentally-based CP schemes trying to transfer to ET.

A further problem encount-

Projects supported environmental education in a number of different ways. For example, in the case of the Urban Spaces Scheme, these included:

- advice on how to develop sites (such as school grounds) to improve their wildlife potential;
- the development of environmental education programmes in support of national curricular initiatives (such as 'primary science', the GCSE and MSC funded TVEI and CPVE);
- direct support in schools for teachers developing and initiating field based practical projects;
- researching essential information to enable meaningful work to be undertaken (including carrying out field surveys);
- the production of resource packs for teachers and children covering a range of ecological concepts and environmental topics;
- organising and delivering in-service courses for teachers;
- supporting and participating in courses organised by LEAs;
- publicising the work of the Scheme so other schools might benefit (for example through the Newsletter and local exhibitions);
- supporting and assisting local wildlife and nature conservation groups to create more habitats suitable for education;
- participating in local events (for example, exhibitions concerned with environmental awareness and education);
- the development of an Ecology Resource Centre in Hackney to which local schools come to undertake field studies in the local area.

ered during negotiations with the Training Commission was the variability with which it applied the rules governing the funding of schemes, and hence the amount of financial underpinning the Commission was prepared to offer Agents to enter ET. Thus, consortia which had received the Commission's approval and had successfully secured places found that at the last moment the financial and structural constraints imposed rendered the scheme unworkable. They were forced to withdraw their proposal at a very late stage – in the case of the Urban Spaces Scheme, five days before ET was due to be implemented.

Environmental education opportunities under ET

ET environmental education projects will be very different from their MSC precursors due to the change in primary emphasis from work experience to training, the reduction in the number of graduate places due to the changed participant targeting and the reduced continuity caused by the shorter occupancy.

Local job vacancies rarely contain any significant number of environmentally related posts. The Area Training Managers will therefore be allocated training places in occupational areas unrelated to environmental work. There are two adverse consequences of this: opportunities for participants to train in environmental areas will be rare and the numbers involved in environmental education will be reduced.

The funding of ATMs is intended to be supplemented by the external placement of trainees with local employers to enable trainees to gain experience in a 'real work' environment. This scheme will be particularly difficult to fulfil in the case of education and environmental organisations as most of these run under very tight budgets and would be unable to fund such payments. Hence, valuable environmental experience which could be gained in the voluntary sector by working for bodies such as trusts, charities, as well as schools, field centres and teachers centres is unlikely to be considered as ATMs will be unable to attract supplementary funding from such placements.

It seems that the opportunity to develop stimulating, creative projects providing a service to the benefit of the wider community will sadly be lost.

It seems that the opportunity to develop stimulating, creative projects providing a service to the benefit of the wider community will sadly be lost and the number of science graduates directed into education and teaching as a career will be reduced. This will deny the new intake of science graduates the opportunity of experiencing environmental work with schools prior to taking up their teacher education courses: so the quality of environmental work in schools will suffer accordingly.

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A lesson in urban studies

Some observations from Nick Jones on changing the status of urban studies.

The urban studies movement in the UK has been going through difficult times in the past few years and is curently trying to create a fresh identity and establish a new national organisation.

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The Council for Urban Studies Centres (CUSC) has changed considerably over the past ten years. From an organisation made up of 'VIPs' who were promoting the concept of study centres in the urban environment, it now consists almost entirely of people who work in urban studies centres. On the face of it this would appear to be a good sign but, ironically, interest in CUSC has dwindled over the years. Streetwork, which publishes *Bulletin of Environmental Education*, is also in difficulties and is currently unable to fund employees at its office in London.

Why, at a time when there are considerably more USCs than ten years ago (and a recent HMI report on their work would seem at least to have acknowledged their contribution to environmental education) should urban studies be having an identity crisis?

It was whilst working at the Toronto Urban Studies Centre (TUSC) this autumn that I was able to reflect on the problems facing urban studies in Britain and to find out how we are viewed by our Canadian counterparts. TUSC staff have made three study visits to UK USCs in the past two years and it was interesting to hear their opinions. There isn't space to go into detail here, but the main point concerned the political stance adopted by some USCs which adversely affects their credibility within the educational establishment. Have USCs stepped over the fine line between educating and campaigning? Surely USCs were supposed to provide neutral ground? Perhaps one of the aims to be found in the 1st CUSC Report (1974) has been forgotten. 'The Council's view crystallises around the promotion of active, outdoor urban studies which are firmly based upon high standards of academic application, accurate observation and critical assessment, just as the studies pursued at field centres can truthfully claim to be.'

Have USCs stepped over the fine line between educating and campaigning?

My personal opinion is that this aim has not been forgotten, but that the image of USCs which has been portrayed nationally has been that of activist rather than educator. This has obscured the educational work undertaken by many USCs and alienated those who prefer evolution rather than revolution as the route to curriculum change.

What impressed me about the USC in Toronto (funded by the Totonto Board of Education) was the number of staff (9 full-time, permanent) which has been built up gradually on the basis of their educational work. The centre now has the educational credibility and influence which will enable it to employ more progressive methodologies and effect curriculum change in the future.

This ought to be a lesson, not just for our USCs, but for any new national organisation which seeks to promote them. Unless it is learned, USCs will continue to be undervalued, under-used and under-funded. ■

Education for the environment: a bicentennial discussion

What does education 'for' the environment mean in practice? And does it necessarily include education 'in' and 'about' the environment? John Fien offers an Australian perspective, based on a document sent to all schools during Bicentennial Year.

1988 is a year of bicentennial celebrations in Australia. Among those who are celebrating the two hundreth bicentennial of human settlement in Australia this year (after all, Aborigines have been in Australia over 40 000 years and 200 times 200 is 40 000), the year has provided opportunities to reflect on many taken for granted assumptions and beliefs. In education, this has meant debate over the scope and purpose of a core curriculum and the place of an Australian studies perspective in such a curriculum. Environmental educators have contributed to this debate through several conferences and publications.

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The purpose of this paper is to share some of the ideas generated about an Australian studies perspective in environmental education and on an environmental perspective in Australian studies. These ideas have been expressed in a special environmental education issue in the Bicentennial Australian Studies Schools Project *Bulletin* series called *Australian Environment*[1] which was distributed to all schools in the country. One of the outcomes of the discussions that provided the core of ideas for *Australian Environment* has been a restatement of the political nature of environmental education and the importance of education *for* the environment.

In *Australian Environment*, environmental education was defined as an across the curriculum approach to learning designed to help individuals and groups to comprehend the environment, and develop caring and committed attitudes and the ability to act responsibility for the environment.

Thus, it was argued that environmental education is concerned about knowledge, feelings, attitudes, skills and social action. As the national Environmental Education Project that finished in 1980 declared, the goal of environmental education is to produce an environmentally literate citizenry with basic knowledge of and concern for the environment, awareness of issues, skills to cope with problems and initiate solutions, and the motiviation and commitment to act in the best interests of the environment[2,3]. This approach to environmental education is known, of course, as education *for* the environment.

In the past, in Australia, commentators such as Greenall[4] Robottom[5] and Maher[6] have argued that education *for* the environment, education *about* and *in* the environment were mutually exclusive, even that the latter had 'colonised' environmental education so that a diluted content-dominated form of environmental education had been incorporated into the mainstream curriculum of Australian schools. This was the situation described in John Huckle's evaluation of environmental education in Australia for the Australian Studies Centre in London.[7] While this situation may well be true, adopting a purist stance on education *for* the environment and thereby defining all others out of environmental education, has done little to encourage educators to consider the full educational potential that they could be pursuing. Such an oppositional stance has only encouraged people to become more entrenched in their old positions.

With this context, and given the one-off opportunity to circulate all schools in the country with a booklet on environmental education provided by the Bicentennial Australian Studies Project, *Australian Environment* argued that education *for*, *in* and *about* the environment were complementary, and that it was the purpose of education *about* and *in* the environment to provide the knowledge and skills necessary for education for the environment to be realized. To some, this may be philosophically

unsound, and an untenable mixing of contradictory educational and environmental ideologies (see Huckle 1983). However, it would be so only if the values and action elements of education were not kept uppermost in mind as the ultimate goal. What many environmental education purists in Australia have failed to do over the years was provide teachers with the tools and exemplars to use their old education *about* and *in* the environment activities as the necessary first step in achieving education *for* the environment. To compensate for this, *Australian Environment* adopted a practical approach and recommended a number of guidelines for values and action-orientated environmental education with each one illustrated by a case study written by teachers. Two of the strategies outlined were issues-based teaching and action learning. The balance of this paper outlines some of the advice on these two strategies of education *for* the environment provided in *Australian Environment*. Perhaps, readers in other countries may find these ideas helpful in reflecting on approaches to education *for* the environment in their local contexts.

Learning through environmental issues

Issues based teaching was illustrated in a case study written by Brian Hoepper and Jean Knight and the 65 pupils in a combined years 4/5/6 class in a Brisbane primary school. In 1986, these pupils studied the Brisbane City Council's plans to bid for the 1992 Olympic Games and the associated plan to allow residential development for the 'competitors' village' in the Boondall wetlands near their school. There was much debate in the city over this plan. The learning programme included the study of newspaper cuttings, site visits, and interviews with Council representatives, the development company, local residents and conservationists. Students had to analyze and evaluate each viewpoint before coming to a personal decision upon which they were divided into one of three groups to develop a pro-development, a pro-conservation or a 'compromise' case. The night the students presented their experiences and conclusions to parents and interested community members (using speeches, videos, drama and songs they had created themselves) was a night that the students and the audience all said they would remember for a long time.

After the case study, *Australian Environment* outlined a number of steps for developing similar programs of education for the environment, based upon the five steps for investigating an environmental issue followed in the case study:

1 Selecting the issue
While this may be done by teachers, it is preferable to involve students in selecting the environmental issue or problem to be investigated. Stimulating ideas may be obtained from the press, television or radio reports and from information from local community groups, planners or councillors. *Australian Environment* followed Rawlings'[9] advice that the issues that 'work' best with a class tend to be those that:

- Involve students in decision-making about current concerns and interests.
- Reveal the differences between 'official' proposals and the values and opinions of 'non-official' groups and individuals;
- Do not encourage simple 'yes' or 'no' answers, but illustrate the range of views possible on an issue;
- Allow learning through direct experience by out of class visits;
- Provide scope for follow-up activities beyond the classroom through some form of community involvement and action.

2 Defining the key questions and problems
This step involves providing a small set of resources eg newspaper cuttings, planning applications, letters from interested parties, guest speakers, tape or video-recorded interviews, slides etc) so that students in a short space of time are able to define the issue, and recognize the social, economic, political and ecological questions at stake and the major alternative viewpoints on the issue. It is important at this stage not to over-simplify the issue or to allow views to dominate.

3 Researching and evaluating the evidence
This step involves education *about* and *in* the environment as students are guided through a series of structured enquiries in gathering detailed information on the background to the issue. The evidence that is collected through a variety of class reading, viewing and listening exercises and through fieldwork needs to be organised into categories reflecting the major views on the issue and then tested for relevance, logical consistency and bias. This testing of the evidence is a vital step in investigating an issue as it enables students to recognize the values-laden nature of much environmental discussion and debate and to develop skills in evaluating evidence.

4 Evaluating alternative solutions
It would be foolish to think that students would not have started to form an opinion of their own by this stage, so it is important that they be encouraged to return to the alternative viewpoints or solutions identified at the beginning of the study and to supplement them with ideas suggested by other students from their enquiries. Especially, students should come to understand the power relationships involved in the way any final decision on the issue will be made so that they recognise the role and influence of interest groups in society. They need to be aware that all views do not necessarily have equal status in the eyes of official decision-makers, and that often conflicting values are at stake. The evaluation of evidence undertaken in the previous step will be of use here as students evaluate the impact of each proposed solution on nature and the likely costs and benefits for individuals particular groups and society in general.

5 Decision-making
The aim here is that students should make an informed decision based on their analysis and evaluation of evidence and views in the previous steps. Students should be expected to understand the values basis of their decision and its implications both in the short and long term, and to be able and willing to justify it in a variety of settings. There is a clear need for class discussion and debriefing sessions so that the students can appreciate both the strengths and weaknesses of their positions and empathise with and respect the decisions that others may have made. It is important too that students are able to assess their decisions against any decision on the issue that may have been made in the public arena and to understand why they may be differences. Students should be provided with information that will help them make contact with community groups interested in the issue should they wish to take further action beyond school. Indeed, there have been cases of education *for* the environment, when opportunities for such follow-up action were built into the investigation itself, as a sixth step.

Learning through environmental action

An important part of issues-based teaching concerns the question of what students should do after they have investigated an environmental issue and come to an informed and reasoned decision that something has to be done. With a commitment to education, it is very hard to say something like: 'Right, kids, yesterday we finished our study of the Boondall wetlands and decided that development would not be a good idea – let's now move onto the next topic'.

Equally, it is very difficult to determine the scale of issue and range of social action or environmental improvement projects that are appropriate to

all classes and topics. Certainly, *Australian Environment* could provide no hard and fast rules for involving students in taking action on the decisions that they make. Instead, it was argued that teachers need to be sensitive to local concerns and traditions in education, and seek the support of parents and school administrators. Yet, it was emphasised that despite the perceived problems that might be involved, there would be a certain degree of deception in leading students through an important values-laden issue and encouraging them to make plans to rectify any problems – and then leaving them 'high and dry' without any school-endorsed avenue for implementing their plans. As Jeff Bishop and Graham Russell[10] have said,

There would be a certain degree of deception in leading students through an important values-laden issue and encouraging them to make plans to rectify any problems – and then leaving them 'high and dry' without any school-endorsed avenue for implementing their plans.

'The real aim of environmental education is to generate action whereby children – both as children and adults – take responsibility for the shaping and management of their own environments. Action is always the most difficult element to achieve, but if it is not there from the start in some way, one is left with education for its own sake, nothing more.'

Australian Environment recommended that environmental action projects must be based on a clear understanding of the interests and forces involved in an issue. In some cases, action will be direct and overt students will take a full, active and public role in the issue. Examples of this type include lobbying to have bicycle paths, park and school ground restoration and beautification schemes; using the school as a bottle, can and paper recycling depot; monitoring local water and air quality; and developing public awareness campaigns against letter, wasteful energy use in the home and school, or the use of aerial cropdusting close to the school and residential areas on windy days.

However, *Australian Environment* advised that there are many issues which may not be as amenable to such *direct* local action. Some issues might be too sensitive or too remote from the immediate environment of students or just too big or expensive for individuals or adolescents to have and realistic direct impact, eg food irradiation, excess packaging, uranium mining, woodchipping, the export of native birds or rainforest conservation. However, actions of other types may be undertaken for issues such as these, including displays of alternative viewpoints in local libraries and shopping centres, letters to the press, interest groups and politicians associated with an issue, attendance at public meetings, short addresses and/or more creative presentations to community groups and service clubs, and class or field simulations on the issue. However, there is a need to ensure students are conscious of the reasons for the different approach to social action taken on such issues and that they understand the nature of the social interests involved.

Conclusion

This practical advice on ways of using issues-based teaching and social action projects to fuse education *about* and *in* the environment with education *for* the environment was supplemented with similar practical advice and case studies on developing an environmental ethic and making political economy as important as ecology in environmental learning. It was argued in *Australian Environment* that together, these four principals could go a long way in creating the sort of society in Australia that would prevent the next 200 years from being as socially and environmentally irresponsible and destructive as the last 200 have been. Such a society would be:

- a *conserver society* that, shunning mindless consumerism, would make its decisions by conserver values such as stewardship, equity, democracy and co-operation. (It was argued in the environmental ethics section of *Australian Environment* that these values lie in the heart of a socially and environmentally ethical society.)
- an *informed society* that is as knowledgeable about its ecology as its political economy. As a result its members would not let others do things to the environment they would not do themselves. (In the political economy section of *Australian Environment* it was explained that the 'destroyers' get away with it, not because Australians are apathetic about the environment but because most Australians have been so miseducated that they think that the destroyers have every right to do what they will with the environment.)
- a *politically literate society* in which people not only care what happens to each other and to the environment, but also have an understanding of the workings of power and the motivation and the skills to do something about it.

Education *for* the environment is necessary, argued *Australian Environment*, if such an informed, ethical and politically literate society was to be created.

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The National Curriculum and environmental education

The National Curriculum will of course influence the future of environmental education. But how – and what has been done to influence the debate in favour of environmental education? Chris Gayford discusses the issues and progress.

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Since the initial proposal for the National Curriculum which was set out by the Department of Education and Science in the Consultation Document of 1987[1] there have been a number of other influential reports and interim documents. These have included the report of the Task Group on Assessment and Testing (TGAT)[2] and the interim and final reports of the Subject Working Groups (SWGs) in Mathematics[3,4] and on Science[5,6]. Currently, the Working Groups on Design and Technology[7] and English on the Curriculum[8] have been set up with a brief to produce interim reports by October 1988 and final reports to the Secretary of State by April 1989. At present, it is unclear what the future is for further SWGs, or indeed whether more will be set up.

It is against this background and rate of working that the environmental education movement has been striving to ensure that environmental education receives adequate consideration. The Council for Environmental Education (CEE) has taken a central role in attempting to co-ordinate the input from the various interested organisations. The CEE, at an early stage, made a policy decision to follow developments closely and to make as full an input as possible to the discussions that are taking place in relation to the National Curriculum. This has been done recognising that the Council has a responsibility to represent, as far as possible, the diverse views and perspectives of its membership. The pace at which the various SWGs have been required to carry out their function has necessitated an efficient and fast response mechanism within CEE.

Responding to the National Curriculum

Early initiatives included an open conference on 'Environmental Education and the National Curriculum' which took place at Reading in February 1988 and gave an opportunity for the membership to discuss general principles and strategies. Shadow SWGs, composed of small groups of people with direct experience in the various areas were established to respond to the SWGs set up by the Department of Education and Science. Full documentation of developments, particularly material relating to the SWGs and the Shadow SWGs have been made available to as wide a readership as possible.[9]

In parallel with these activities, a Parliamentary Lobbying Group was set up whose brief was to make a co-ordinated input into both Houses, particularly the Lords, as the Education Reform Bill went through its various stages. A number of papers were sent to a targeted selection of Peers, followed by a briefing at the House shortly before the Bill reached its Committee stage. Two amendments were tabled on behalf of the 'Environmental Education Lobby' which , though finally not adopted, succeeded in securing a debate of the highest quality in the House and a number of encouraging ministerial statements.

In the Consultation Document of 1987[1] it was apparent that little direct support was given to environmental education, despite previous government assurances that it was considered to be an important matter.[10] However, there were two particular and related aspects to the Consultation Document that required special consideration from those with a concern for environmental education. Firstly, a number of important cross-curricular areas had been acknowledged, most of which were unspecified at that stage, but which by the tone of the document could include environmental education. These aspects of the curriculum would require co-ordination, both between the various cross-curricular areas and across the subject areas identified within the new curriculum. Secondly, it was clear that the SWGs would be responsible for ensuring that these cross-curricular areas were included as appropriate.

In its response to the DES' Consultation Document, CEE expressed the widely held view that environmental education was not a discrete subject but should be treated as an approach to learning. Support for an environmental dimension within the curriculum should be part of the basis for any general education. The emphasis which has been placed on dividing the curriculum into the traditional subject areas was likely to encourage subject chauvinism and to inhibit cross-curricular work.

The tone of the DES Consultation Document emphasised two further aspects relating to education in general terms. One was that education has the important function of preparing pupils to enter employment. The other was that assessment and testing were the major vehicles for improving and maintaining standards. The rapidity with which TGAT[2] produced their report at an early stage in the development of the National Curriculum underlined the fundamental role of assessment.

The implications of assessment

From the TGAT report, a basic structure for assessment and the production of the various subject areas was established. Basically this set out a scheme for assessment, on a more or

less continuous basis, with reporting stages at the ages of 7,11,14 and 16 years, building on the work of the APU (Assessment and Performance Unit)[11] and the GCSE Examinations.[12] Assessment at 16 years would conform, at least for the time being, with the GCSE examination. The report recommended that each SWG should produce a curriculum on the basis that there are a number of a attainment targets (objectives) which are identified, each of which should relate to programmes of study outlining the material to be covered. The programmes of study in turn would be related to levels of achievement, the intention being that achievement would be monitored and recorded on a ten point scale. The scale would also allow for progression from one age group or stage of education to another. Thus the youngest children of lowest ability will be at the first point on the scale and the eldest pupils of the highest ability will be at the tenth point. The system allows for overlap between age groups and achievement levels as follows: 5 to 7 years levels 1-2, 7 to 11 years levels 3-6, 11 to 14 years levels 4-8 and 14 to 16 levels 6-10.

In order to focus attention further on the range of desirable understanding, skills and abilities to be developed, a series of 'profile components' (cluster of related areas of knowledge and skills) should be devised for each subject area. In all cases the attainment targets will relate to one or more of the profile components. To facilitate a cross-curricular approach it was felt important that the profile components should be few in number (up to a maximum of 6 in each subject) and that some would be common, or have common elements, in more than one subject area.

Several aspects of the TGAT report require special consideration and comment at this stage. It is clear that in the report, evaluation of whether courses are achieving their aims receives little discussion, and then only as an extension of assessment, where it relates to the performance of institutions in preparing pupils to meet the assessment criteria for the National Curriculum. The process envisaged here involves performance in terms of achievement of pupils viewed as an aggregate. Also, understandably, the assessment of attitudes is considered to be an unreliable area for testing and there is a clear recommendation from TGAT that attitudes are not to be included in formal assessments.

In consequence, it is very likely that this aspect of education will be neglected and this has important implications for environmental education, since a good deal of its justification relates to attitude development and the creation of awareness amongst pupils.

With increased emphasis on assessment, it is likely that teachers will be deterred from including aspects of education of a broader nature in their programmes.

Furthermore, with increased emphasis on testing and assessment, even at early stages in education, it is likely that teachers will be deterred from including aspects of education of a broader nature in their programmes. These aspects may have been enriching, allowing pupils to widen their experiences and to begin to develop their own values on important issues. Pupil profiling is mentioned in the report in the context of attitudes but the concept is not developed sufficiently to allow a clear understanding of how it may be realistically undertaken.

Also emerging from the TGAT Report, however, is the strong suggestion that some of the important developments in assessment should be extended. Assessment should be criterion referenced so that it relates to attainment targets rather than comparing pupils' performance and it should be calibrated and progressive to take account of a continuum of maturities and stages in a process. The danger – which will be readily appreciated by readers of the document – is that with such an elaborate and integrated assessment component to the National Curriculum, testing may become the major feature of the activities that take place in schools – thus limiting activities which are not readily assessed and also emphasising competition at the expense of co-operation.

Influencing the Subject Working Groups

The first two SWGs, Mathematics and Science, submitted their Interim Reports in the latter part of 1987[3,5] and they have now both submitted their Final Reports to the Secretary of State in August 1988.[4,6] The way in which the two Working Groups approached the task of consultation was quite different. The CEE responded to both Groups by making a submission as soon as the terms of reference and guidance to the chairmen had been released by the DES. The Mathematics Group, by deliberate policy, provided few opportunities for response. On the other hand, the Science Working Group encouraged interaction with the specialist groups who had responded initially to their work. At each stage in the development of the Final Report, CEE was invited to comment at length; this was carried out either through an oral presentation to the Working Group followed by written submissions or through written submissions alone. It was also apparent even at an early stage, that the Working Group was willing to accept that the environment could be an important context for science education.

Perhaps those with concern for environmental education should view current attitudes among science educators as something which has been slowly developing over the years; this is reflected through various documents and initiatives of the Association for Science Education,[13,14] the Secondary Science Curriculum Review[15] and the Department of Education and Science Policy Document[16]. In all of these, it has been made clear that science education should be related to attitudes of responsibility. In a number of instances, the environment is specifically mentioned. The National Curriculum in Science seems to be building on this general line of development. As with other developments in the curriculum, particularly under the APU and GCSE, there has been emphasis on a broad range of skills and abilities which children need to learn including practical problem-solving as an important part. Although this development is to be encouraged, it should be seen by the environmental education lobby as part of a continuum which should also include the consideration of controversial issues and decision-making.

There is national concern over science education in the primary sector and here, just as with science education with older pupils, the environment is a relevant context for work. Indeed, some of the most successful science education undertaken in primary schools in recent years has involved an environmental approach (such as Schools Council Science 5-13).[17]

Science and technology are frequently presented to the public as exploitative human activates. In dealing with Working Groups of the National Curriculum it has been stressed that an environmental approach will help to balance this with ideas of responsibility and conservation.

The Design and Technology and English Working Groups have received their terms of reference and will produce their first report by the end of October 1988. The CEE has responded by setting up Shadow SWGs and submitting comments to the respective chairmen. Of the two, the response of the Design and Technology Group has been particularly welcoming and indicates that further dialogue may be encouraged.

Problems and opportunities

From the point of view of those who wish to promote environmental education there are a number of very encouraging aspects to the National Curriculum. However, there are many important things that have not, as yet, been satisfactorily addressed. These include the need for relevant INSET; present 'GRIST' programmes do not appear to provide the flexibility required for adequate training of teachers from the whole range of curriculum areas to give them the competence to integrate a suitable environmental approach into their teaching. In addition, finding resources is likely to be an issue which will arouse controversy in the present climate of thinking in central government, particularly if the matter of extra time or different resources is taken into account.

Already there are signs that the strongly utilitarian approach to education hinted at in the initial discussion document has not been followed through in such an extreme form by the SWGs; this is encouraging and should be recognised. The pervasive influence of assessment is still apparent but the degree of prescription which concerned many educators has not been apparent in the reports that have appeared so far. Indeed these reports have gone to some lengths to allow teachers scope to use their imagination when devising courses. However, in the light of recent experiences with GCSE assessment it may be unwise to underestimate the possible effects of extensive demands made on teachers and pupils in this area.

One of the greatest challenges facing those who are drawing up the details of the National Curriculum and who will oversee its implementation is to ensure that the range of cross-curricular areas identified is adequately emphasised and co-ordinated to provide coherent balance. For this to happen, it is essential that there is an overview of the whole curriculum with consideration given to the nature of the experiences that children are given and the progression of these experiences from 5-16. The way that this is co-ordinated between the different elements of the formal curriculum is crucial. This will require subject specialist teachers in one area of the curriculum to work with specialists from other areas in a way which has happened fairly rarely in the past.

For such cooperation to take place, it must be a planned part of the National Curriculum and it must form an important part of a comprehensive INSET programme. The environmental education movement has a vital role to play in this process. CEE in co-operation with its Member Organisations is considering how best to contribute to these important aspects of the implementation of the National Curriculum.

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Environmental education in the primary school: a future?

Simon Catling looks at the impact of the National Curriculum on the primary school and in particular the role of geographical environmental education.

Simon Catling

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In September 1989, the National Curriculum will come into effect. Meanwhile, it will concentrate the mind wonderfully! Its provisions make a number of clear statements of vital importance to those concerned with environmental education. These include:

- **it is not referred to at all in the list of curriculum subjects;**
- **it will not be one of the curriculum areas to be tested;**
- **there will be no attainment targets or levels of attainment identified for environmental education;**
- **no programmes of study will be laid out for it, upon which schools can build.**

This is the overt message of the Education Reform Act of 1988. Yet there is evidence that the Working Groups in Science, and Design and Technology, for example, have taken the advice to identify cross-curricular links, including the link of these subjects to 'environmental awareness'. Thus, the proposed attainment targets in Science for Ages 5-16 on 'Human Influences on the

Earth', 'Earth and Atmosphere' and 'Science in Action: Technological and Social Aspects' all relate to environmental concerns. Approaches to study are also suitably reinforced. Some examples of achievement levels in the mathematics attainment targets are drawn from environmental study. It would seem, then, that the cross-curricular dimension is being taken seriously at Working Group level. Whether this sees its way to the curriculum directives finalised by the National Curriculum Council is awaited with interest.

Putting the case for geography and enviromental education

Other subject areas including geography are not so well advanced. By the end of October 1988, no sign had been given about the timing of the Geography Working Group. Were it to be set up almost immediately, September 1990 is the earliest its programmes of study could be laid out for primary education; September 1991 sounds more likely. Is this important? For environmental education, the blunt answer is 'yes' – for several reasons:

- There is a long tradition especially in primary education of environmental work which is closely intertwined with geographical study, not only in local studies but increasingly in development education.
- Many of those teachers who have been active in promoting environmental education have drawn on geographical expertise building on the investigative fieldwork approach and exploring both perceptions of the environment and ethical issues.
- The development of a coherent perspective on attainment in geography for 5 to 16 year olds – which focusses not only on knowing about and understanding the environment and the skills of investigation and cooperative and co-ordinated study, but also on the evaluative and ethical dimensions – will play a central role in promoting the continued role and development of environmental education across the curriculum. It is vital that the initiatives taken by the Science Working Group are supported and extended.
- In particular, at the primary level, a focus on environmental education through geography can be developed which will aid cohesion across curriculum subjects enabling the development of effective interdisciplinary and 'undifferentiated' work in approaches such as Topic Work.

Like the Council for Environmental Education and its sister organizations, the Geographical Association is concerned to ensure the very positive role of environmental education in the curriculum. In the context of the National Curriculum, the GA's National Curriculum Working Party is drafting its own view on the range of curricular issues, concerns, elements and foci that need to be taken into account by the Geography Working Group when it is set up. The role of geography in the development of 'environmental awareness' is seen as crucial by the GA's own working party. The working party's report should be published early in 1989 and its proposals on attainment targets in geography will indicate the concern about the future of environmental education which the GA shares with other environmental organisations.

In addition, two of the sub committees of the Association, concerned with primary and middle school curricula and with environmental education, have met to explore the interrelated nature of geogrphical and environmental work, and as a result will be producing a publication intended to offer advice and ideas to primary and middle school teachers. This publication will supplement and reinforce points made in the second edition of the GA's recently published handbook Geographical Work in Primary and Middle Schools (1988).

The role of environmental education

What does all this imply for environmental education in the primary curriculum? Does it have a future? Will it be subsumed within subjects, or will it have an integrating role and also be a focus in the development of children's understanding, skills and values?

The starting point for the development of the National Curriculum in subject areas such as science and geography (not to exclude others) will not only be the attainment targets that are laid down. It will also be 'where teachers are' in both their own development and in the form the curriculum takes in their schools. In many schools there is concern – quite rightly – about developing science and geography in a 'subject focussed' way. There is a desire to develop and extend effective work such as direct experience approaches to teaching and topic work.

There is, therefore, a firm basis for the argument that the development of achievement in National Curriculum subjects must be founded on appropriate and effective approaches with young children. The real, and positive, role of the subjects will be to inform integrated and multi-disciplinary approaches linked to first-hand experience, not to replace them. In this sense, the proposals of the Science Working Group provide both a reinforcement of good practice and a guide to improving practice in environmental education; the geography attainment targets should offer a similar way forward.

Environmental education acts as a strong focus for developing young children's experience and understanding of the world around them. Its integrating quality will encourage the development in primary schools of a coherent approach to direct experience work. It provides a platform for schools to develop curricular programmes with both five year olds and eleven year olds which explore topics in depth and which draw upon the interrelated and undifferentiated enquiries of children. For example, a class of six year olds making a study of the school grounds will be interested in a wide range of features and phenomena found around the school, including minibeasts, litter, toilets, weathering, places to play, areas unknown and a host more, which provide an entry into exploring habitats, locations, distributions, changes, the effects of natural forces and people, and so forth. It will raise questions about what it is like, how it feels, whether it could be nicer, and what the effect might be of moving such-and-such be.

To differentiate such an exploration into subjects of study for the children would be to impose rules that destroy the sponteneity and vivacity of the 'game'; yet it is vital for the teacher to be able to distinguish the nature, focus and value of the questions children ask, so that effective learning opportunities can be followed through.

The role of the National Curriculum is to enable the latter; the value of environmental education lies in both providing the context for and the material of learning. There need be no conflict, but rather a strengthening of both through their complementary interplay in the development of children's experience, awareness, understanding and mastery of their own perspectives, knowledge, skills and values. An effective example of this is given in the GA's *The Good The Bad and the Ugly* (1982) which describes an integrated locally-based environmental study with 10 and 11 year olds. The real import will be to encourage good primary practice to become universal.

The value of environmental education lies in both providing the context for and the material of learning.

Present needs

This is not to say that all is and will be rosy. Teachers clearly have a number of needs. It is

appropriate to conclude by identifying what some of these are for primary teachers. They are points which the Geographical Association, among many others, has made on more than one occasion!

- the development of INSET programmes that look at the contribution of cross-curricular areas, such as environmental education, to complement the need for in-service work in the subjects including geograpy at primary level;
- the identification in schools of a teacher with responsibility for environmental education which may well cover geography, science and history for example. Where 'posts' coexist, close cooperation will be needed amongst staff. This will be especially necessary in consortia of small schools, and will need funding;
- the development of school curriculum policies that are put into effect in classes, and which, therefore, need to be 'owned' by the staff to be effective, which implies an evolution of policy rather than its setting in stone;
- the provision of resources to enable and encourage environmental study. The environment may be 'free', in terms of access; its study is not. Many schools need to extend not just their book-base but their equipment-base as well;
- a positive attitude from the government of the day which enables HMI and encourages parents to view environmental education as central to the effective education of children and to see that it can 'deliver' much of the National Curriculum. ■

Feature – International links

Increasing recognition of global and transboundary environmental issues, and interest in the educational possibilities of modern communications have encouraged a number of school link projects. These seem to offer great potential and so we asked three innovative schemes to report on and evaluate their experiences.

School Links International – an overview

Cherry Mares

Project Director, Tidy Britain Group Schools Research Project and Co Director SLI Project

The School Links International (SLI) project began at a Council of Europe seminar on Geography for International Understanding at Donaueschingen in October 1985. The delegates wanted to continue working together on some of the ideas which emerged during the seminar and Rex Beddis (the late Adviser for Humanities in Avon) and I decided to find Avon teachers willing to be linked with these European colleagues.

This network, the SLI project, would explore ways of increasing international understanding and environmental awareness and responsibility within the framework of the curriculum.

Initial action

The first few months of the project were crucial for clarifying the principals of linking. Class to class linking was adopted because it seemed to offer great potential for involving all pupils in both individual and shared activities irrespective of ability. It was equally important that linking should be part of the normal curriculum, and provide a progressive and sustained experience which justified the commitment of time and effort involved.

The success of the initial seven month study encouraged us to carry out a more extensive feasibility study from September 1986 – July 1988. By July, over one hundred and twenty class links were in operation between primary schools in Avon and forty countries around the world. An impressive amount of pupils' work had been sent and received – pictures, slide tapes, videos, writing, maps and diagrams, poems and stories, and artifacts of all kinds. Most schools started by exchanging personal information about themselves and their families, leading on to descriptions of the school, neighbourhood and then on to wider environmental themes such as housing, transport and pollution. This was a useful experience as pupils had to learn to examine, analyse, evaluate and understand their own environment so that they could explain it to their friends. While the materials exchanged revealed fascinating cultural contrasts and differences, pupils were able to recognise and appreciate common interests, issues, concerns and ways of behaving.

Monitoring progress

A system of monitoring and record-keeping was developed so that the project team could keep an overall view of all the links, identify those in need of help, and ensure that the curriculum work in individual schools was progressing coherently. Teachers were asked to complete forms every time they sent or received material, explaining briefly the curriculum context in which this had been produced or used, the pupil activity generated and the quality of this activity.

These records now form a bank of ideas and suggestions and provide some understanding of the richness of the experience that children are being given through their links.

There has been a further element of continuous assessment through visits to schools, examination of pupils' work, informal conversation with pupils, written reports, workshops and discussion. Some time has also been spent on pilot testing methods for the objective analysis of pupils' attitudes towards people and countries other than their own. This involved approximately 400 children in Avon and West Berlin and showed considerable differences between the responses of the experimental and control groups, confirming our subjective view that the experience of SLI was beneficial for all concerned.[1]

A team effort

Regular INSET meetings have been of prime importance for the Avon teachers. At these meetings, teachers present pupils' work and analyse it in terms of curriculum objectives. They also discuss success and failure, examine relevant local or national curriculum initiatives and practise various skills and techniques. Every opportunity has been taken to ensure that teachers and advisers feel that SLI is a team effort with everyone contributing to decision-making in a context where all aspects of the project are valued. The result has been well attended INSET days which take place in an atmosphere of trust and support. This atmosphere is one of the strengths and satisfactions of the SLI project.

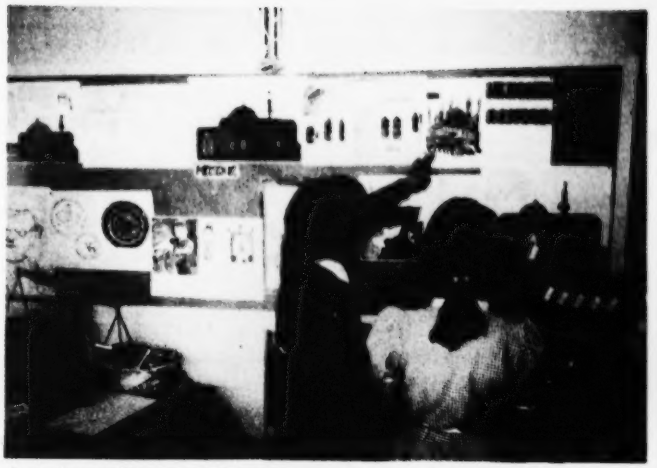
In some countries such as Italy, West Berlin, Sweden, Portugal and Australia where several schools in the same area are linked with Avon, it has been possible to find a university lecturer or LA adviser to act as co-ordinator, maintain contact with schools, arrange INSET meetings and help with evaluation. Unfortunately, this is not possible everywhere and for this reason, the various project publications such as the 'Starter Pack' by Eileen Adams, the regular project newsletter, and the SLI teacher handbook[2] have an important contribution to make.

Linking need not involve extra expenditure. The cost of INSET meetings has been covered by Avon's normal inservice and GRIST budgets. Other exceptional costs such as postage, travel and publications have been funded through the generosity of the Central Bureau, the British Council, the Standing Conference on Education for International Understanding and the World Wide Fund for Nature (UK). The educational value of materials received far outweighs any postage costs and we have a unique collection of resource material produced by children which will soon be available on loan for teachers in Avon to use.

Overcoming problems

Dealing with the inevitable problems that arise is a valuable learning process. Letters and parcels of work have been despatched and no reply received. Under such circumstances children and teachers are naturally disappointed and we have to learn strategies for dealing with and avoiding apparent rejection. Sometimes eagerly awaited parcels have contained little of obvious interest, but teachers have responded to the challenge and found ways of exploiting even apparently uninteresting materials.

We learnt that briefing which may be adequate in one education system may be incomprehensible in another and that it is essential for everyone to understand the aims and methods of curriculum linking, if any significant dialogue is to take place. We also learnt to be sensative to different situations in other countries, to possible feelings of insecurity and inadequacy, to wide variations in professional training and expectations, and to embarrassment over very different levels of resourcing. All these and many other matters are discussed in great detail in the SLI handbook[2].



A study of different religious communities being prepared for Stuttgart

Reasons for success and satisfaction

Despite problems, there is no doubt in the minds of those closely connected with SLI that the project is a success and achieves its aims of increasing international understanding and environmental awareness. There are a variety of reasons for this success. The enthusiasm and commitment of Avon teachers and children and the support of the Director of Education and his advisory service are obviously crucial, as is the dedication of the support team. The regular inservice days and newsletter are of great value.

We experience the satisfaction of seeing pupils highly motivated by the SLI experience, learning new communication skills and producing work of a consistently high standard.

Teachers welcome the opportunity to take part in an international project and in new initiatives such as electronic mailing. Even more important for the teachers is the constant challenge and resulting extension of their own skills which has a profound effect on their competence and confidence.

We all experience the satisfaction of seeing pupils highly motivated by the SLI experience, learning new communication skills and producing work of a consistently high standard. We have no doubt that linking can make an important contribution to social and environmental education as well as to the wider curriculum. Most important is our belief that the experience of linking increases tolerance, awareness and understanding of other peoples and the global environment we share, not only in the children who are linked, but in the teachers and pupils in the schools concerned and in the wider community.

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School Links International – a personal perspective

Ray Harris

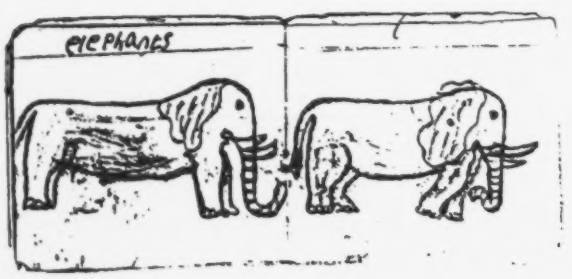
Paulton Junior School, Bristol

In my school we have local, national and international links, including Bristol, South Wales, West Germany, Sudan, Kenya, Chile, Australia and Brunei. Some will last just a term, others a whole year, and our link with Othaya, Kenya has lasted four years. Each link also has a character all of its own, mainly to do with the people who are closely involved with the link and partly to do with the needs and expectations of both classes.

The experience of linking with schools both locally and internationally seems an important one to young people as firstly, they can appreciate their lack of knowledge about their own country and secondly, appreciate another country's regional differences and its heterogeneous nature rather than view it as a single entity. Materials that have been exchanged include audio cassettes of poems, songs, and stories, craft work, environmental activities (such as the possible used of 'waste' land near the school), science experiments (such as acid rain comparisons), plans and 3D nets of the school, houses and shops, and peace and friendship symbols.

As important as the materials received and sent, are the methods used to produce the materials and to interpret information from other countries. It is hoped that the personal involvement of the children may lead to more self-reliance in terms of decision-making and presentation. Group and individual initiatives have been seized upon to generate ideas about what should be sent and how it should be presented. Another emphasis is the active nature of the link – what will the children in our link school be able to do with our materials? Can they build a model, solve a problem, finish a cartoon story?

Drawings from Othaya, Kenya sent to Paulton School



Drawings from Othaya, Kenya sent to Paulton School

It is worth discussing some of the many problems that do beset school linking, as teacher problem-solving has been an important part of our in-service sessions.

1 Young people may only maintain their enthusiasm while they are receiving materials, within a time span of a few weeks. With countries as far away as India, and in rural environments, delivery time using lower cost surface mail, may be extended to five months. Comments from children might include 'They're not interested in us, they don't care about us!' and this may lead to reinforced rather than reduced prejudices. This seems to happen in the crucial early phase of the link, when the class may be at their most intolerant, as they have no personal commitment to the other class. However, an aware and creative teacher may develop strategies to reduce the disappointment of delay, by establishing more than one link for example, or suggesting to the class that a reply would be a bonus rather than a certainty due to the vagaries of global postal systems.

2 Another problem which is likely to be apparent in many links, is that of varying perspectives – not only in terms of what activities can be undertaken through linking but also of the worth of the activities themselves. For example, my class might like to send to our friends in Kenya some of their poems about peace issues, or their concerns about rainforest destruction. However for a rural Kenyan school, global peace issues or even bullying may not be something that they can easily relate to. Their village culture is centred on friendship, co-operation and community responsibility. This need not be a problem as such, because we certainly can learn from each other, but it is something that has to be discussed at teacher level through frequent letter exchanges. Some of the concerns raised by Alice, the link teacher in Othaya, Kenya, can be illustrated by part of a letter sent to me early on in the link programme:

'We discussed with the children what we would like to tell your children. Some children even felt that since the Europeans know everything, there is nothing we can amuse (interest) them with. We have tried to write about our daily lives, eg the food we eat, going to the river to fetch water, picking coffee or tea, and planting our shambas. Our homes

are built of mud, mixing soil and water – would this really amuse you or would it be looked upon as a dirty and hard life? The problem which I am mostly facing when preparing the children is language, since English is our second language. Most children I know have made grammar mistakes!.'

For me, trying to get my children away from the 'mud hut' view of life in an African country, (as it is often tied up with pot-boiling cannibals portrayed in the comics they read), I have to emphasise not only the skills needed to construct buildings out of local natural materials, but also provide images of a wide variety of buildings and people in one African country so as to reduce any negative reactions to such information.

Has the linking programme had any effect on the attitudes of my class and how would I know anyway? Before embarking on any link I would try to discover where my children were starting from. Here are some comments made prior to starting the Kenya link:

'The people are coloured, I think.'
'I think it is a hotter country.'
'I think they speak a foreign language.'
'There are not many trees there.'

After nine months of linking, exchanging materials about three times, these comments were made by the same group:

'I think Kenyan children sound friendly, work hard, like school and a lot of other things.'
'They enjoy getting water from the river with their friends, are happy most of the time and work together in their village.'
'They are just like us, although they are black, but they have got to do more work than us, but they do not complain.'

And the final comment:

'Kenyan children are caring and happy, skilful and helpful, poor in money but rich in ideals.'

Attitudes are not going to change just by exchanging a few parcels, but the link work does encourage activities that support such change through analysis of text and images in the media, discussion of human needs, rights and expectations as well as issues of sexism and racism and environmental concern and responsibility, both locally and globally. All this has to be undertaken within a classroom that encourages co-operative working, builds trusting relationships between individuals, takes cognizance of similarities while celebrating differences between people and their lifestyles. A tall order but worth working towards! ■

Curriculum co-operation between teachers and students from Sweden and the United Kingdom

H Birgit Hansson
William A H Scott

H Birgit Hansson, Soderslattgymnasiet, Trelleborg, Sweden, and William A H Scott, School of Education, University of Bath

The starting point for the current Sweden – UK curriculum co-operation project was a Council of Europe conference on 'Acidification' held in Sweden in 1986. The focus of the project is environmental education within advanced level science courses in both countries. Its methodology emphasises co-operative work between teachers and between students in the two countries and involves the teachers working together in each other's schools. Before the project was set up, experience had already been gained from the SEC Project which was begun in 1983.

The SEC Project

The Social and Economic Competence (SEC) in the Curriculum of Europe project involves teachers and students from Greece, Italy, Portugal and the UK in work on common topics which is exchanged, analysed and evaluated in each country.

The principle focus of the SEC project is the development of a 'European dimension' to the work of schools through the encouragement of active, participative work across national boundaries. No curriculum content is specified and a wide range of issues have been studied with environmental education being a natural focus.

Teachers in the SEC project come together annually to:

- share and evaluate their joint work;
- debate the major learning points to emerge;
- plan the next phase of project activities.

Evaluation has shown that an important contribution to the project's success has been the face-to-face meetings of teachers which provided for thorough planning and evaluation and enhanced mutual understanding of both curriculum and culture. Successful co-operation has required a structured approach to planning and agreement on all essential aspects: a common approach to recording data and clear deadlines.

Obstacles to the work of the project have been that it has not been easy to match the needs and resources of teachers and schools in different countries, communication has not always been effective, and the annual conference has not been sufficiently school-focused. A major problem remains that of raising the funds to support the annual conference.

Sweden – United Kingdom co-operation

It was with these positive and problematic features in mind that, following the 1986 Swedish conference, a link was established between sixth-form science teachers in Sweden and England. The purpose was to increase students' and teachers' knowledge, understanding and awareness of the two societies, with particular reference to environmental issues.

This co-operation involved meetings of the teachers in each other's schools separated by a period of time for carrying out agreed tasks. The model assumed that hospitality and local transport costs would be provided by the host teacher. The two main advantages of this model over that of the SEC project were that:

- teachers were able to work in each others' schools with staff and students, experiencing the curriculum in action;
- costs are reduced and cultural awareness increased because of the 'home-hospitality' element.

These developments made the project more school-focussed and gave the students a greater and more direct involvement in the work.

The pilot phase

The pilot phase of the project occurred in 1987. This involved study of:

– intensive versus traditional farming methods;
– soil and water analysis;
– people's awareness of and attitudes to local pollution;
– people's knowledge of and attitudes to organically-grown

foods, and their use of nutritional information on food packaging.

Students communicated through letters and videos made of their locality, the school, themselves and their studies.

This survey was the most successful aspect of the co-operation because it allowed the most direct comparisons to be made of the data emerging from the studies. Even where no direct comparison could be made of work done in the two areas, interesting data were collected about the two localities which contributed to students' understanding of their own communities.

Students valued broadening their studies with a focus on the life of the local community; they benefitted from contact with students from another country and culture. Teachers had the satisfaction of working with someone in another edupation system and culture in planning, communicating, reviewing and evaluating the work.

The major points to emerge which affected thinking about how the project might develop were that:

- a 9-12 month period is required in total – 2-3 months for negotiations, 5-6 months to do the work, 2-3 months for the sharing and evaluation.
- too much work should not be planned as this reduces the likelihood of success;
- better results are obtained if each country begins working on a different topic with a timetable for the exchange of results;
- more emphasis should be placed upon students corresponding with each other, if the European dimension is to be a reality for them.

The second phase

The success of the pilot phase and the support received from regional and national education authorities led to the extension of the project to more schools and teachers. The aims and criteria for the project were revised as follows.

The project aims to:

- bring teachers and students into personal and working contact with their equivalents in the other country;
- give teachers first-hand experience of another country's education system, schools and curriculum by allowing them the opportunity to work together on topics of mutual interest;
- give all participants the opportunity to compare the work that is carried out within the two science curricula with particular reference to environmental issues – and to see the resources that each has available and the priorities that each sets;
- enhance all participants' knowledge, understanding and awareness of the other country, with a particular focus upon environmental pressures and concerns.

The criteria for the project's work are that it should:

- be student-focussed, providing opportunities for students to plan, implement, share and evaluate their work in conjunction with students in the other country;
- arise naturally from the everyday work that the students are doing as a part of their normal studies so as to extend and broaden their activities;
- be carried out in each of the respective localities but be capable of being shared between participants;
- be related to the lives of the two communities so as to increase participants' understanding of their own and the other society; and, through co-operation with students in the other country, bring a European dimension to their work;
- be able to be extended to other classes and schools;
- be subject to monitoring and evaluation within and between countries.

Current activities

There are now six pairings of teachers working on common programmes of work (September 1988 – June 1989). Colleagues met in June 1988 to agree the work to be done and the techniques to be employed; they identified the sequences in which the activities would be carried out, agreed dates for completion and for the exchange of data.

Surveys of people's views are being carried out by all groups. Experience has shown that the joint development of questions, construction of questionnaires, implementation of surveys and the exchange and analysis of data are activities that can be accomplished quite successfully, and yield valuable comparative data. Examples of other activities include:

- analysis of water pollutants
- using lichen as pollution indicators
- measurement of acidic precipitation
- newspaper coverage of environmental issues
- energy-use surveys and experiments on energy conservation
- soil analysis
- a comparison of methods of electricity generation
- environmental effects of smelting processes
- public attitudes towards energy conservation

This work will be carried out between September 1988 and June 1989 and will be discussed when the UK teachers work in Sweden in 1989. There are also plans for students to work in each other's schools.

Environmental problems know no international frontiers – neither should co-operation by teachers.

Postscript

The work of both of these projects in continuing. Each plans to expand its activities, involving more teachers and schools. The models of co-operation described here are appropriate for many areas of interest and development – but particularly so for environmental education because of the emphasis on direct involvement of students and teachers from different countries. Environmental problems know no international frontiers – neither should co-operation by teachers. ■

The Hertfordshire-Norwegian Project

David Shirley

Conservation Officer, Hertfordshire

In the autumn of 1986, about 180 schools in Hertfordshire and Norway began a co-operative investigation into the acid rain phenomenon. For a year, pupils and teachers carried out surveys and experiments, pooled results and exchanged environmental information. The project drew support from WATCH, research scientists, politicians, industrialists and the media. The work is continuing but the experiences of the first year provide useful indications of how future joint studies may be planned as integral parts of environmental education.

Development of the link

The Hertfordshire-Norwegian link developed from the 1985 Oslo conference 'From Environment to Action'. Direct co-operation between schools from different counties was

seen as a means of increasing pupils' awareness of environmental issues from the local dimension to the global. In the following months Sissel Dobson, a teacher from Kongsberg and a leading member of the Norwegian Conservation Society, and I prepared a scheme to give schools in Norway and Hertfordshire the opportunity to investigate jointly the problems of acid rain.

Direct co-operation between schools from different counties was seen as a means of increasing pupils' awareness of environmental issues from the local dimension to the global.

The aims of the project were:

1 to carry out practical investigations into acid rain in each school's locality;

2 to encourage links between schools in each country to exchange the experiences and results of their findings;

3 to pool the results from Norway and the UK to provide a broader international background to work at the local level.

All schools in Norway and Hertfordshire were invited to participate and linked according to the age range of their classes. Over ninety pairs were established and each school was sent a set of background material to enable them to carry out simple experiments and to find out where local and national information could be obtained.

We were extremely fortunate that the launching of the scheme coincided with the UK 'Acid Drop' survey instigated by WATCH, the environmental organisation for young people run by the Royal Society for Nature Conservation. WATCH had developed a simple kit for monitoring the pH of rainfall in a standardised way which would allow direct comparison of results from different areas and situations. Kits were made available to the Norwegian schools and their Hertfordshire links and the monitoring period programmed for the same time as the WATCH whole UK survey.

This coincidence proved a great asset in that it gave an initial central focus to the project. However, the surrounding activities were of equal or more significance. It was soon apparent that there were differences in awareness of the acid rain phenomenon and associated problems between the schools of both countries.

Many of the Norwegian teachers and pupils were already actively involved with liming lakes in attempts to reverse the acidification process and their knowledge of the controversy about the causes and effects of acid precipitation was initially much greater than their English counterparts. Although teachers and pupils in Hertfordshire were generally aware of the problems most of their knowledge was academic and, in a county dominated by chalk, their involvement in the acidification controversy was minimal. To offset these shortcomings, a number of short courses were run for Hertfordshire teachers. Representatives from the Central Electricity Generating Board research laboratories at Warren Spring, Friends of the Earth and the Royal Norwegian Embassy brought them up to date with scientific and political developments. Several organisations also contributed videos, slide packs and other teaching resources.

Direct communication between school pairs began in the autumn of 1986 and as the collated results of the monitoring became available these too were sent to the participants. In the summer of 1987, reciprocal visits were arranged for teachers in both countries. Amongst other things, this enabled Hertfordshire teachers to see at first hand the effects of acidification and experimental investigations into fishery and forest deterioration and the Norwegians had the opportunity to see the efforts of the CEGB to reduce atmospheric pollution at Fiddlers Ferry Power Station. The teacher exchange was followed by the first pupil exchange in the autumn of 1987.

Evaluation and future developments

As an exercise in international collaboration, the first year of the Norwegian-Herfordshire link undoubtedly had a fair measure of success. It appealed to Hertfordshire schools for several reasons: there were virtually no language difficulties as communications were in English; acid rain was an extremely topical subject; the link had a practical basis which could be well delineated; and it was well supported by education authorities and environmental organisations.

There were some difficulties which impeded the involvement of some schools. The lack of staff time and funds meant that some paired schools did not receive sufficient back-up to deal with administrative problems. In some cases the enthusiasm for joining the scheme did not persist through to the stage when results become available at the national level. And then, of course, there were the hiccoughs in postal deliveries of letters and kits.

The project involved pupils of all ages and schools developed their studies in different ways. For some of the Hertfordshire primary schools, for example, it was a cross-curricular activity involving cultural aspects, especially art and literature, as well as the scientific.

Acid rain amply demonstrates the importance of concentrating contributions from many disciplines and interests in environmental problem solving.

Many of the Hertfordshire secondary schools used the project as part of their work for GCSE courses in science and geography. The experimental and survey aspects of the project made clear contributions to the scientific development of pupils but the presentation of the acid rain phenomenon as an environmental problem brought additional demanding intellectual and practical challenges. As a real environmental

issue, full of controversy but requiring speedy resolution, acid rain amply demonstrates the importance of concentrating contributions from many disciplines and interests in environmental problem solving.

The Hertfordshire-Norwegian link is continuing with further pupil involvement in monitoring low altitude ozone concentrations and the effects of atmospheric pollution on fungi. However, the extension of the scheme to other environmental issues and as a format for others to follow needs more consideration. Schemes which involve no language barrier are obviously easier to establish although linking with French, German and Spanish schools is an attraction which we would like to pursue in Hertfordshire schools. However, the choice of topics and their educational suitability for practical involvement is of primary importance.

Possibilities within the GCSE syllabuses include aspects of agriculture, fisheries, aquatic pollution, waste disposal, soils and nature conservation. All of these could provide the mix of experimentation and monitoring with commercial, political and social considerations that is essential in increasing environmental awareness and understanding. Within the complete age range 5-16, parts of the Hertfordshire-Norwegian acid rain project would have contributed to several programmes and attainment targets recommended in the report of the National Curriculum Science Working Group: future projects should seek to do likewise.

The co-operation of WATCH in the acid rain link saved considerable time and money in the provision of practical apparatus. Perhaps WATCH and similar organisations should be actively encouraged to contribute to future school links.

The involvement of many schools in a project has obvious advantages in producing a mass of data and comment for analysis, but has disadvantages in terms of the workload for teachers and administrators. The Hertfordshire experience suggests that future projects should be based on a very simple framework so that schools are aware of the limit of their commitment to the project as a whole but have the option to develop their linked studies using their own resources.

Updates

Learning through Landscapes project

The *Learning through Landscapes* project has now reached the final phase of its three year research into the design, management and use of school grounds. Sponsored by the Countryside Commission, the DES and twelve local authorities, one of its original aims was 'to assemble material and develop techniques for improving the environment associated with schools – the information to be disseminated by the publication of a national DES design guide.'

Eileen Adams
Project Director

On further reflection, it was thought that perhaps this might not be appropriate, as there are so many different schools in a variety of situations. However, guidance on the educational use of school grounds, and on their design and maintenance is certainly needed, as many are currently in a very impoverished state. But perhaps it is better attempted through illumination than prescription.

During the first two years of the research, there has been an attempt to find out more about the thinking behind established practices in the design, management and use of school grounds.

Why do we have so many windswept, soggy playing fields and unrelieved expanses of tarmac surrounding school buildings? What exactly does maintenance of school grounds entail? How is it organised? How do teachers make use of the grounds as a resource for learning and teaching?

The research has been carried out in a number of ways – correspondence with local authorities, school visits, reports from schools, interviews with practioners, from various fields, meetings, expert seminars and document research. A Consultative Committee, a Steering Committee and a Primary Teachers' Group have offered advice on both the content and conduct of the study.

During the last year, the material will be examined and evaluated in preparation for the publication of a variety of packs, booklets and books addressed to the various groups involved. Plans for publications are still being formulated, but it is anticipated that these will include:

- two packs for teachers on using primary school grounds as a resource to be published by Scholastic Publications;
- two books on design, management and use of school grounds to be published by the DES and aimed at local authorities;
- a book for teachers on the use of primary school grounds;
- a book for teachers on the use of secondary school grounds;
- a book aimed at parents, governors and elected members on how schools have worked with community agencies to develop their grounds.

Many schools are already very much involved in developing their grounds to extend their potential for learning. There is evidence of much work in science, maths, nature conservation and design education in primary schools. However, the project would welcome more reports from schools on how grounds might be used for social education, aesthetic education and language development as well as advice on how play is used as a medium for learning. Teachers in primary schools have been more ready to contribute to the research material, but the project has been able to discover little about the use of secondary school grounds – with a few notable exceptions – apart from the traditional ones of sports and games.

It will be some time before the publications appear – probably 1989 and 1990 – but if you wish to keep in touch with developments, you can be included on the mailing list and receive newsletters and information leaflets. The project's address is now Third Floor, Technology House, Victoria Road, Winchester SO23 7DU. ■

Global education

The 'Global Impact' project (Centre for Global Education)

1988 saw the work of the 'Global Impact' project (see *AREE*, no 1, 7-10) move towards conclusion with the preparation of a follow-up volume to *Earthrights* (WWF/Kogan Page, 1987). This second publication draws upon a range of interviews conducted during the year with primary and secondary teachers and representatives of development and environmental non-governmental organisations. It will a) identify and explore strategies for change in school that are both effective and in harmony with the holistic philosophy presented in *Earthrights* and b) propose a range of change strategies for the 1990s. The book will be published in March 1989. There will be a launch in London followed by a series of regional press launches and educational workshops.

Conferences

The year saw two important conferences. The 'Education for Global Futures' conference organised by the Centre for Global Education (11-13 March, Losehill Hall, Derbyshire) brought together sixty teachers, advisers and representatives of non-governmental organisations to explore the findings of the 'Global Impact' research team and to consider change strategies (ideas pooled have been incorporated into the new project book). In addition, there was a (repeated) programme of four practical workshops and an afternoon 'marketplace' session at which participants could present the projects and curriculum developments with which they were involved.

From 16-18 September, the World Studies Network held its fourth bi-annual conference in Sheffield. The conference title was 'World Studies: An Approach to the National Curriculum'. The programme included lectures and short briefings on aspects of the

David Selby

Director, Centre for Global Education

national curriculum plus a choice of seven workshops – on challenging inequality and injustice through science teaching, whole school policies for the earlier years, teaching about controversial issues (Southern Africa case study), class and world studies, the hidden curriculum, gender and world studies and cross-curricular themes in the primary school.

New publications

1988 has seen the publication of some important handbooks for teachers. *Global Teacher, Global Learner* by Graham Pike and David Selby (Hodder & Stoughton) offers a reconceptualisation of global education, and exploration of the relationship between global education and interactive learning styles and and some two-hundred activities for the primary and secondary classroom. *Teaching Geography for a Better World*, edited by John Fien and Rod Gerber (Oliver & Boyd) is an important collection of essays on how geography can be an effective vehicle for the consideration of global issues (essay titles include 'Teaching about Human Rights in Geography', The Geography of War and Peace' and 'Stereoscopic Visions: Perspectives on Gender – Challenges for the Geography Classroom'). *Education for Peace: Issues, Principles and Practice in the Classroom*, edited by David Hicks (Routledge), offers an introduction to the field of peace education and ten case studies written by English and Australian practitioners. *Human Rights: An Activity File* by Graham Pike and David Selby (Mary Glasgow) contains some twenty-eight activities on rights for the primary and secondary classroom. During 1988 two numbers of the *World Studies Journal* have appeared: volume 7, no. 3, 'Health and the Environment' explored the holistic concept of health and its application to schooling and included a number of practically-oriented articles on environmental education; volume 8, no. 1. was principally devoted to global education and foreign languages but also included a supplement on assessment. The *Journal* is available from the Centre for Global Education.

Forthcoming events and publications

In July 1989 the World Studies 8-13 Project will hold its next national conference at St. Martin's College, Lancaster. By that date, the Project's new book, *Making Global Connections: a World Studies Workbook* edited by David Hicks and Miriam Steiner (Oliver & Boyd) will have been published. This will include five practical case studies – on forest environments, aboriginal perspectives, gender issues, poverty and world food – as well as chapters on the world studies classroom, world studies and equal opportunities and issues of evaluation. *The New Social Curriculum*, edited by Barry Dufour (Cambridge University Press, 1989), will carry chapters on global education (Graham Pike), gender education (Janie Whyld), ecological and environmental education (John Huckle), multicultural and anti-racist education (Barry Dufour), human rights education (David Selby) and peace education (David Hicks).

Note for LEA advisers: a new brochure outlining consultancy services and Diploma courses offered to LEAs and schools by the Centre for Global Education is available on request from Gail Slavin, Secretary, Centre for Global Education, University of York, Heslington, York, YO1 5DD. ■

John Baines marks a decade

The end of 1988 marks 'the end of an era' at CEE, and in environmental education as a whole, as this is the time when John Baines steps down as Director of the Council for Environmental Education (CEE). After ten years of steering the ship, sometimes through stormy waters and uncertain light (a former

Stephen Sterling

Executive Editor, AREE

University porter used to call him Cap'n Baines after the 'Onedin Line' character), John has decided to hand over the helm to a new Director.

John came to CEE in 1978 from the Commonwealth Institute where he was Education Officer, and previously had been Head of Geography at Rickmansworth School. In those early days, CEE had a staff of three, a small income and an uncertain future. From those humble beginnings, John fought long and hard on behalf

of CEE and environmental education to establish both firmly.

The positive results and effects of John's commitment, optimism, diplomacy and tireless hard work on the world of environmental education have been many and it is entirely in character that many of those benefitting at local or national level from his work will often not be aware of his decisive contribution. His intention always was to enable CEE to provide coherence and support to all environmental educators, to represent the area where needed, and create a climate supportive of others' efforts. It was a tough goal, but one which he largely succeeded in achieving. Without his work and vision, environmental education would undoubtedly enjoy far less status and health than it does today, whilst CEE itself has been transformed into a highly respected and professional organisation.

The Director ran in the Reading Half Marathon to raise money for CEE.

John has decided to 'go freelance' in the area of environmental education, publishing and media. Environmental educators everywhere owe him a debt of gratitude, and will wish him well in his new life. ■

Book Reviews

School Links International – a New Approach to Primary School Linking Around the World

Rex Beddis and Cherry Mares, Avon County Council, Tidy Britain Schools Research Project, 1988, ISBN 0 905277 07 4

Every now and again an extremely useful and informative book is offered to classroom teachers. *School Links International,* compiled by the late Rex Beddis and Cherry Mares is just such a book. It is practical, attractive in presentation and compact. In addition, it has a good pedigree. The immediate feeling as one flicks through the pages is is of a professionally produced publication that demands closer inspection. Every page represents an aspect of good primary practice as sought in classes and schools throughout the country.

Review by

W F Chapman

Environmental Education and Humanities Advisor for Essex

Some readers new to the thought of extending their work to other countries, may indeed be entitled to think they are covering most of the work, methods or themes already. What the book conveys quite clearly however, is that we are no longer in ignorance of what happens elsewhere but we are a part of it. The classroom practice is therefore directed towards a definite objective of understanding others through educational activities, ultimately linking in some real way with children in other lands. Whilst there may not be anything new in education, this book deals comprehensively with normal practice, yet all the time emphasises how and why there should be a wider outlook beyond the local community. All the projects or topics can be viewed through this extended vision.

This book is about children; where they live and what their responsibilities are towards their environment and others. It deals with the whole area of communication with others including language and electronic mailing. The National Curriculum is touched on and is not considered a barrier to SLI work. If a child-centered approach to education is something you are looking for, then this book can give you and your pupils extra motivation or ideas. Is this a perfect book one may ask. Perfection is often strived for and in many ways this book approaches it. ■

Global Teacher, Global Learner

Graham Pike and David Selby
Hodder and Stoughton, 1988, 0 340 40261 X

Review by
Annette Beard
Beacon School, Crowborough, Sussex

This handbook should prove to be an invaluable resource for a wide range of teachers. It is a stimulating and thought-provoking book on an academic level, and provides a very convincing and comprehensive rationale for the place of global education on the school curriculum. It very sensitively uses the case of 'Emily' so that any reader can empathise with the importance of global education, through the experiences of a school student.

In addition, the book has a wide range of ideas for approaching global issues. As a practical handbook, I have found it invaluable in:

– the development of a new Social Studies course for the lower secondary range;

– new and exciting strategies for a Personal Education and Life Skills course;

– generating enthusiasm on an in-service course on 'Teaching Styles'.

The practical section of the handbook is informative and imaginative. It is divided into sections so that it is possible for teachers to choose the teaching style most appropriate to their requirements. It is reassuring to know that all the activities have been trialled by enthusiastic exponents of global teaching.

The book should not be regarded as a 'useful standby'. The activities should be integrated into a variety of areas of the curriculum: a section in the book that shows how global issues can be taught in all traditional subject areas.

Let's hope that the National Curriculum allows this important area to be developed so that the students of today can become participating citizens of the 21st century. ■

Ecology in the Curriculum: 5-19

Monica Hale for the British Ecological Society, BES, 1988

Review by
A J Comber
Churchdown School, Churchdown, Glos.

This booklet has been prepared for the attention of government, LEA's curriculum development committees, examination boards and teachers. Within its twenty pages it presents a clear and concise summary of the desirability of including ecological studies within the curriculum of all school pupils. Following an introduction to the document, and to the science of ecology and its applications there is a review of its place in both primary and secondary education. This is a well-thought out section and makes reference to the appropriate DES policy statements, as well as GCSE subject criteria. Subsequent sections deal with the need for in-service teacher training, support from LEAs and the role of the British Ecological Society. The end of the booklet consists of recommendations regarding schools and the curriculum and teacher training.

I would expect that many of the readers of this journal are already in sympathy with the aims of the publication under review and as such would find it superfluous on their own bookshelves. It does however provide a neat encapsulation of those ideas that many of us try to incorporate into our teaching and should provide an excellent reference for those seeking to convince others of the desirability of ecological education; this is a booklet that ought to receive a wide readership. ■

Environmental Education : Practice and Possibility

Ed. Ian Robottom, Deakin University, 1987, ISBN 0 7300 05437

Review by
Chris Gayford
Reader in Education, University of Reading

Through five extensive papers this book considers past and current practices in environmental education and discusses alternative approaches which could shape future action. Although based in the first instance on the Australian context, most of the issues raised have wider application and the book offers a useful overview of international developments and thinking over the last two decades. Those expecting an exposition on present practice will be disappointed. However, what the book does provide is a thought-provoking discussion of the purposes of environmental education in the even broader arena of educational aims, in which the social and political aspects are emphasised.

The approach throughout is academic and some may be deterred by this; but careful or repeated reading will be rewarded because the book does address certain fundamental issues. For instance the general directions of education are considered in which the tension that exists between the traditional emphasis on acquisition of knowledge and the problem solving, action-orientated goals which characterise certain developments in environmental education is examined. Also, the socially critical and political aims of environmental education are set against what is still frequently an uncritical role assigned to schooling in maintaining the current social order. Education in which teaching is orientated to separate disciplines leading to fragmentation is suggested as one of the limiting factors to the adoption of environmental education. It is argued that environmental problems usually relate to the quality of life and matters which cannot be resolved by the application of any one discipline; thus environmental education has a nature which is essentially interdisciplinary.

The book contains many fascinating and illuminating discussions and among them is a feminist critique which shows, from a particular perspective, how environmental education issues relate to other important areas such as human rights and relationships. This is only one example of the insights offered.

The book is recommended to readers. It has a message which challenges the dominant conceptions of education and calls for fresh approaches to teaching and learning. This is one of the first books where an attempt is made to analyse environmental education at this level. Educational aims are discussed against various frameworks in which development can take place and an important perspective is given to the way that environmental education can establish itself in the curriculum. ■

A Common Purpose: Environmental Education and the School Curriculum

World Wide Fund for Nature, 1988, £4.95, ISBN 0 947613 06 4

Review by
Michael Storm
Staff Inspector for Geography and Environmental Station, ILEA

This is an important and timely publication. The eleven contributors have set out to demonstrate that the phrase 'cross-curricular theme' is not necessarily a meaningless consolation prize for educators whose interests have not been identified as core and foundation subjects in the national curriculum.

Each essay thoughtfully demonstrates how the environmental dimension can and should be apparent throughout the curriculum – not as an afterthought, or an occasional episode, but as a central, highly-motivating concern. The subjects represented are physical education, languages, mathematics, science, religious education, music, English, geography, history and technology. This sequence is appropriately preceded by an analysis of the significance of the very local – the school's own environment. 'We cannot expect children to value that which is not evidently valued by the school.' This committed yet non-polemical tone is well sustained by the other writers, though the editor might usefully have discouraged lists and tables, and rationed italics.

Environmentalists debating or defending the proposition that environmental education can be carried forward as a cross-curricular theme will find this book an invaluable resource. ■

New Ideas in Environmental Education

Salvano Briceno and David Pitt (eds), Croom Helm, 1988, £25.00, ISBN 0 7099 5042 X

Review by
Stephen Sterling

This book is an attempt by IUCN, (now more conveniently named the World Conservation Union), to promote 'new thinking in environmental education'. The volume is made up of fourteen essays by different authors, which are organised under two sections 'Frameworks for ideas and action' and 'Third World Situations'. It should be welcomed on the grounds that there are too few such books which try to advance thinking in the area, and even fewer which take an international look at existing work. However, I'm not sure the book is entirely successful. For example, if environmental education is to be assisted, there are several areas that need addressing which are not clearly covered here. But maybe I'm looking too much from the perspective of the needs of the UK.

Further, with the exception of John Smyth's excellent and lucid contribution 'What makes education environmental?' I found some of the essays in the first section too general or theoretical to inspire much 'new thinking'.

For me, the main value of this book lies with the second section, as sources of information on experience and programmes in the Third World are not easy to come by. We all too often engage in environmental education work including 'global awareness' in this country yet give little thought to the educational experience of our neighbours in the Third World – where the effects of environmental issues are often keenly felt. The eight case studies presented in this section are illuminating, both in terms of showing advances in environmental education that have been made, but also the real barriers to progress that often pertain in these countries. The various contributions make it clear that in many cases it is non formal education programmes centreing on public awareness which are effective, the schools' role often being severely constrained by a range of factors including the legacy of old colonial educational structures. We no doubt could usefully learn from some of the strategies explained here.

There is much of interest in this book, although ultimately one can only agree with the editors that perhaps we require 'less new ideas than better means of converting ideas into action including international action'. This book deserves wide readership if it will help stimulate such action, but unfortunately its price will deter many. ■

Nature areas and the primary school curriculum

Conservation Matters series, Book 2, Nature Conservancy Council, 1988, £5.00

This report makes the case for greater use of nature areas in school grounds as a learning resource. It argues for the wider recognition of environmental education as an approach across the whole curriculum.

Drawing upon fifteen case studies of schools in England and Wales, advice is given on how a nature area might be developed and used. The case studies demonstrate that the development of a nature area within school grounds is a worthwhile objective for all schools if it is linked to the development of the curriculum.

The report also includes important recommendations (based on research) on how environmental education could be better integrated and supported at primary school level. ■

Europe Environmental Yearbook 1987

DOCTER International Institute for Environmental Studies and the European Economic Community, 1987, £45.00

At over 800 pages, this is an impressive tome by any standards. It is essentially a reference compendium of various authors' contributions on the state of environmental protection in the twelve member countries of the European Community. Detailed information is clearly presented on resources, policies, funding etc in many areas including agriculture, energy, forestry, fauna and flora, leisure, toxic substances, water supply and river management, pollution of air, land and water, and urban renewal. Environmental legislation is also covered in some detail.

If one needs such information, this volume along with perhaps the World Resources Institute/IIED's *World Resources* annual publication, would give very comprehensive coverage.

For the environmental educator then, the book functions as a source of environmental information, but it also covers the status of environmental education in each country of the Community. A unique and useful volume, though not cheap at £45. Subsequent editions are planned. ■

Stop Press!

The following was received in December in reply to a letter from AREE's editor to Kenneth Baker relating to the implications of a resolution by the Council of Ministers of the European Community.

John Butcher

Parliamentary Under-Secretary of State, Department of Education and Science

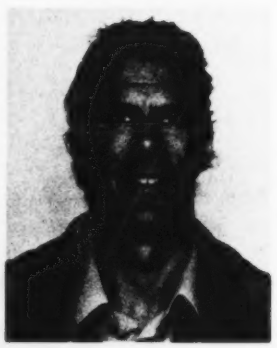
As many will know, in May of this year the Council of Ministers of the European Community adopted a Resolution on Environmental Education. The Government fully endorses the aim which the Resolution embodies, of promoting environmental protection by increasing awareness, on the part of citizens in general and of young people in particular, of environmental issues and of the individual's responsibilities in this regard.

To a considerable extent action of the kind specified in section 11 A of the Resolution is already being taken in the UK. Within the national curriculum framework in England and Wales, environmental education has been identified as a cross-curricular theme which will feature within the teaching of a number of foundation subjects such as science, geography, and technology. Subject working groups are being asked to take account of such cross-curricular themes in their proposals of what 5 to 16 year olds should know, understand, and be able to do. The outcomes of some subject working groups have already been published and made available to schools, others will follow.

Of course, thought must be given to how environmental education can be put into practice conscientiously and carefully. We will be seeking advice on such matters and will in due course prepare a report for submission to the European Community Council in 1990. In the meantime, the forthcoming HMI document in the Curriculum Matters series, *Environmental Education, 5-16* should be a valuable source of help to teachers.

The responsibility for the content of courses in further and higher education lies with the providing institutions, and in vocational (including adult) training courses with the institution or often with the employer commissioning the training. Course content is not at present directly determined by the Government. But the wide range of community and national initiatives in the environmental field must clearly have an important bearing on the demand in the UK for specialist training.

CEE has appointed a new Director



Dr Ewan McLeish becomes CEE's new Director on 3 January 1989. On accepting the appointment he stated, 'I firmly believe the leading role that CEE has taken and will continue to take in providing a coherent and respected voice on behalf of the environmental education movement, is of paramount importance.'

Dr McLeish who has a First Class Degree in Zoology is well qualified for the job. After graduating, he trained as a teacher and worked with young people both as a teacher and a youth tutor. He joined the CEE Youth Unit in 1981 and prepared courses, publications and events. In 1987, he set up the Formal Education Unit and became its first Head.

He has been responsible for developing its very successful programme of work, which has included the preparation of the education programme for the UK organising committee of European Year of the Environment and the co-ordination of the CEE responses to the National Curriculum proposals.

Dr McLeish replaces John Baines who has been Director since 1978. ■

Members of CEE

Assistant Masters and Mistresses Association
Association for Science Education
Association of Agricultural Education Staffs
Association of Agriculture
Association of County Councils
Association of Metropolitan Authorities
Association of Polytechnic Teachers
BBC Education
British Ecological Society
British Trust for Conservation Volunteers
Centre for Environmental Interpretation
Civic Trust Heritage Education Group
Committee of Vice Chancellors and Principals
Community Service Volunteers
Conservation Trust
Council for Urban Studies Centres
Countryside Commission
Countrywide Holidays Association
Environmental Education Advisers Association
Field Studies Council
Forestry Commission
Geographical Association
Heritage Education Trust
Historical Association
Independent Broadcasting Authority
Inland Waterways Association
Institute of Biology
Institution of Environmental Sciences
Marine Conservation Society
Museums Association
National Association for Environmental Education
National Association for Outdoor Education
National Association of Field Studies Officers
National Association of Head Teachers
National Association of Teachers in Further and Higher Education
National Federation of City Farms
National Federation of Women's Institutes
National Institute of Adult and Continuing Education
National Trust
National Union of Teachers
Nature Conservancy Council
Open University
Prince of Wales Committee
Royal Institute of British Architects
Royal Society for Nature Conservation
Royal Society for the Prevention of Cruelty to Animals
Royal Society for the Protection of Birds
Royal Town Planning Institute
Secondary Heads Association
Society of Education Officers
Society for the Interpretation of Britain's Heritage
Streetwork
Tidy Britain Group
Town and Country Planning Association
Tree Council
Welsh Joint Education Committee
The Wildfowl Trust
World Wide Fund for Nature (UK)
Young People's Trust for Endangered Species
Youth Hostels Association

Observers

Confederation of British Industry
Department of Education and Science
Department of the Environment
Scottish Education Department
Welsh Office

CEE EDUCATING FOR THE ENVIRONMENT